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OF AUSTRALIA



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SYDNEY: SATURDAY, DECEMBER 3, 1927.

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**AN ADDRESS TO RECENT GRADUATES IN
MEDICINE.¹**

By GERALD WEIGALL, M.B., Ch.B. (Melb.),
Elsternwick, Victoria.

WHEN you accepted the invitation of the Council to be present here tonight, you expected to have to listen to some speech of welcome and advice and were no doubt prepared to put up with it; but you naturally expected that as on previous occasions, it would be from some acknowledged leader of the profession in one of its special branches.

I can imagine, therefore, your disappointment and surprise (which latter, I share with you) when you found that a general practitioner was chosen for the task.

If you ask me why it is so, I can answer only in an indirect way. When motor traffic threatened to drive horsed vehicles off the streets of London, the authorities of the British Museum determined, before it was too late, to secure a well-preserved specimen of the hansom cab and put it where future generations could learn what a previous generation had had to put up with.

You are now being afforded the opportunity to tell your children that as a young man you saw a well-preserved specimen of the general practitioner. But as a general practitioner I realize that I belong to a doomed race. No less an authority than the London *Punch* said recently that with the increase of specialism the functions of a family physician are merely those of a glorified shopwalker who shows his patients into the various specialists' departments and a Supreme Court judge in this State when summing up to the jury in a case of professional negligence said: "This man does not profess to any special knowledge, but only the average amount of kill and scare which is expected of any general practitioner."

But I realize that it is a privilege to address in any capacity such a large number of medical men who have never made a professional mistake, and I realize also that I am addressing a number of men who all intend to be specialists. This is not odd because the outstanding points about a specialist which appeal to all of you are: (i) He has more or less regular hours; (ii) he has dignified chambers in the heart of a big city; (iii) he does not go out at night; (iv) he gets double fees. But I may add, this does not cover the whole ground.

It is necessary first that he should possess some special skill or knowledge of the functions or organs on which he specializes, sufficient to make that knowledge sought for by his professional brethren. And secondly, he must have that general knowledge which comes only of experience, which enables him to estimate correctly the part played by that organ or function in disturbing the health of the patient, as a whole. Without that knowledge he is useless.

A patient may be ill and tired and wretched because of a combination of such diverse special conditions as: eye-strain; enlarged tonsils; bad teeth; incorrect diet; a reducible but unoperated hernia; a misplaced organ.

¹ Delivered to recent graduates in medicine of the Melbourne University, September, 1927.

A specialist (without general training) is apt to see only the defect of which he is specially cognisant, but an intelligent and experienced practitioner should be able to say what part, if any, each of these factors is playing and may be very wisely acting, in adding: "Your real trouble is that you want a holiday and with more exercise and less liquor most of your troubles will disappear."

It will increase the importance of these views of mine in your opinion, if I tell you that they are shared by the most thoughtful and successful specialists of this city and so I am leading up to a point of which I want you to take special notice and that is, that however brilliant a future you may see ahead of you as a specialist, you should prepare yourself to do the best work by (for a few years at any rate) going through the mill of general practice. Feeling that some at least of you will act on this advice, I intend to speak to you for a few minutes on that subject. As I have been qualified for thirty-five years and in general practice for thirty years, I can claim to have had some experience of it.

I intend to speak in a general way this evening of your relationship to the public and to your fellow practitioners. In the first place allow me to extend the congratulations of the Council and of the Victorian Branch of the British Medical Association to you on getting over the first hurdle and to extend a hearty welcome to you on behalf of this society.

The first thing that occurs to you is your natural pride in belonging now to a privileged class. The most popular person in the community, so long as he is true to the traditions of that class, is undoubtedly "the doctor."

It is reasonable then to ask that the first thing that you should resolve on is to do nothing to lower the prestige of the profession that you are now entering.

But before it is too late, you must also first realize its drawbacks:

1. You will have to be unceasingly at the beck and call of your practice and thus automatically be cut off from any other forms of public life.

2. You will have a life full of petty worries and large anxieties.

3. You will never be a rich man, compared with those who achieve success in other businesses or professions.

4. You will be unjustly blamed and criticised for cases that go wrong through no fault on your part.

5. You will have innumerable temptations arising out of your profession: (i) Temptations to perform unnecessary or improper operations to increase your bank balance; (ii) from unscrupulous women, who look upon doctors as fair game and a "safe risk"; (iii) to keep yourself going with drugs or alcohol to get over the fatigue engendered by your worry and irregular hours of work.

What then is to be said in its favour?

1. Your work is your greatest interest in life, your hobby as well as your bread-winner. This is essential and if you feel it is not so now, get out before it is too late, as I know of no more pathetic object than a medical man of forty who hates his

job and is keeping only a second-rate practice going to keep a roof over his wife and family.

2. No person in the community has a better opportunity of knowing the inner life of those round him than the general practitioner. He is admitted to all their secrets. The ghosts in the family cupboard are let out and introduced to him and for the first time are estimated at their real worth.

3. He sees people in their supreme moments of joy and grief and (if he has that temperament) can share the former and ease the latter by the kindly sympathy that is bred of common-sense and a genuine desire to help.

4. Arising out of this, he in course of years becomes the real friend and trusted confidant of his patients in nearly every matter which concerns them deeply.

5. He has innumerable opportunities for doing good by putting people on the right path, instead of the wrong one. For example, a word or two as to the husband's whisky and a little advice to the wife on the question of the need for a family as a matrimonial cement. In discussing the dangers of venereal infection to the young man and the risks of illicit relations with all the misery that follows it.

6. And lastly the consciousness that he is something more than a tradesman or a shopwalker; that he fills a useful niche in the structure of society and that he will, when the time comes to leave off (or go under) leave behind memories of a good man whose work was well and faithfully done.

Having decided then, that it is worth while to go on, what is the most essential characteristic for a medical man to possess? Taking it for granted that he has a fair share of professional ability and the necessary amount of human sympathy, I would say undoubtedly honesty. Not only do I mean in money matter, though that is very necessary where one is dealing with lunatics, absentees, executors *et cetera* where there can be no check, but your own conscience on the bill that you decide to render.

Many men, I fear, look upon such cases as fair game, to make up for bad debts elsewhere, but I hope you are all enough of sportsmen not to want to shoot a sitting-bird, even for the pot. I refer, however, more to honesty of mind and conduct. Never pretend to knowledge which you do not possess. Be honest enough to say, when you do not know. Be honest enough to feel sure in your mind that if it was your wife or brother to whom you were giving advice, you would feel satisfied that the proposed operation or line of treatment was reasonably likely to give them a fair return for the amount of anxiety, pain, time and money that it is going to cost them.

Be honest enough to say sometimes, "This is a case in which Dr. 'X' could do more for you than I could. I will, with your leave, ask him to take it over."

Be honest enough to admit that you were misled in your conception of the condition, but the combination of symptoms was such an unusual one that

your failure to diagnose was not due to want of care or want of skill.

Be honest with your fellow practitioners. Take it for granted that they too are trying to play the game according to their point of view and that they are not necessarily fools or blackguards even if your patients tell you stories suggesting both. I would go further and make friends of them, meet them socially as well as professionally, play games, golf, bridge and tennis with them. Have them to dine with you and if they are in professional difficulties, do not try to score by their mistakes, but honestly try to help them out of a difficult or an awkward situation.

Be honest with your patients when they ask you to do something shady, such as giving them a bogus certificate of ill-health of disability or to give an opinion that you do not believe to be true, because it suits their business side. Say frankly: "I would be pleased to help you in any way that did not impugn my honesty, but the value of a certificate from me is that my word up to now has been believed and I do not propose risking it being disbelieved." He will be annoyed at the time and you will lose a fee, but you will have set for that man a new standard which, while he may not emulate, he is bound to admire.

Be honest to your lodges. Give them what your contract sets out, your most careful and thorough attention, while you have the time to spare for lodge patients and when you feel that it has ceased to be a paying proposition to do so any longer, resign your lodges and you will have set them such a standard of attention that most of them will regard you as an exceptional person and come to you still as private patients.

Be honest with yourself and occasionally submit to yourself the following questions: (i) Am I giving my patients my best attention? (ii) Am I treating them as I would hope to be treated if the position were reversed? (iii) Are they getting fair value for what they pay me? (iv) Could they be better served by anyone else?

Having answered these questions to your own satisfaction you may repeat Robert Louis Stevenson's prayer:

The day returns and brings us the petty round of irritating concerns and duties. Help us to play the man, help us to perform them with laughter and kind faces. Let cheerfulness abound with industry. Give us to go blithely on our business all this day. Bring us to our resting-beds, weary and content, and undishonoured, and grant us in the end the gift of sleep.

Now in conclusion, I will recall to you a speech made by the late Sir John Madden some years ago which made a great impression on me:

I have lived many years and have accumulated many possessions, but the time is growing very near when I must leave them all behind. My material possessions I can leave to my family and my friends, and it is a pleasure to me to think that they will live to enjoy them, but it is a matter of great regret to me to realize that the most valuable thing that I have acquired in the last fifty years nobody wants, and nobody will accept from me as a gift. I refer to my experience.

I have given you the results of my experience—it is for you to accept or reject them.

**CLINICAL USES OF THE SLIT LAMP MICROSCOPY
IN OPHTHALMOLOGY.**

By GRANVILLE WADDY, M.B., Ch.M. (Sydney), D.O., B.Sc. (Oxon.).

Lecturer in Ophthalmology, The University of Sydney; Honorary Ophthalmic Surgeon Royal Prince Alfred Hospital, Sydney.

THE slit lamp is of such comparatively modern introduction that its use is by no means universal and its advantages are so little recognized as to justify some remarks upon it. I cannot but sing its praises in the highest strains.

The apparatus consists of an illuminating system by means of which a narrow beam or slit of light is projected on to the portion of the eye under examination: lids, conjunctiva, cornea, or into the tissues of the anterior segment of the globe, aqueous, iris, lens and anterior vitreous. The other half of the apparatus is a binocular microscope giving magnification up to thirty-five diameters. To attempt to do modern eye work without a slit lamp is just about paralleled by the comparatively inefficient view of a horse race with the naked eyes, as against detailing it with a pair of respectable binoculars. There is no doubt that the introduction of the slit lamp in ophthalmology will mark an epoch. The ordinary binocular loupe which is universally used in eye work gives a magnification of some three diameters—the slit lamp gives about thirty-five. It would be idle for anyone to argue that the former could be as good as the latter. Nevertheless, amongst those who do not use a slit lamp, there are those who argue that it is a time waster, saying, anyone who has time to use a slit lamp in private practice has too small a practice to earn an ophthalmologist's basic wage. With a modern apparatus this charge fails, as it can be used binocularly with the expenditure of not more than two or three minutes. Some of the older types were very troublesome, but they are now out of date. Figure I depicts a modern slit lamp microscope. Figures II and III illustrate the appearance of the beam as it is thrown through the cornea, aqueous and lens.

Amongst the clinical uses to which the apparatus is put the following represent by no means an exhaustive list.

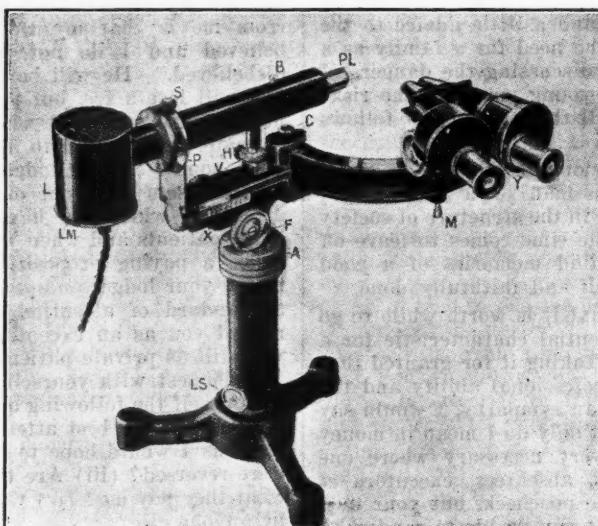


FIGURE I.
Showing a Modern Slit Lamp Microscope.

Lids.

The ordinary oily blepharitis shows up remarkably plainly and generally a quantity of the rubbish and oily exudate is visible, suggesting a thorough cleaning of the lids and lashes. The parasite louse, *pediculus pubis*, has been seen in the fullness of its glory and the nits admit of no mistake. Stray lashes, including finest downy ones, are immediately detected. I have been able to see very fine lashes in this way, which the binocular loupe has failed to detect.

Conjunctiva.

By a simple process the circulation of blood corpuscles in the conjunctival vessels can readily be detected. It forms a most fascinating and alluring picture. Seeing the corpuscles scamper after one another in a long narrow chain, rather jerkily, like sheep through a race, one at a time, is quite thrilling the first few times it is observed. Limbal ulcers, tumours, lymphangiectasis and such like conditions can be magnified and studied. Post-operative fistulae, trephine scars and iridectomy inclusions can be examined and much information gleaned as to their thickness, the amount of pigment and of oedematous infiltration *et cetera*.

The Cornea.

The cornea offers one of the biggest fields of utility of the slit lamp and a good deal of practice is required before the different areas of the *parallelepipedon* are identified and identifiable (see Figure IV.)

The epithelial surface can be examined over the whole extent, important from the point of view of fine abrasions, exposed nerve ends and so forth. There are numerous occasions on which one is not quite certain that the whole of a foreign body has been removed; slit lamp examination settles the question in a moment. It determines the depth of penetration of wounds of foreign bodies or ulcers, also the degree of healing of abrasions, ulcers *et cetera*.

In a patient recently under observation two small pieces of metallic foreign body were localized in the cornea very close to the posterior surface. Rust particles were radiating and discolouring the iris over a small circumjacent area. The other eye had a foreign body in the vitreous resulting from an acetylene explosion some six years previously. Prior to the slit lamp examination the above mentioned particles had escaped detection.

Corneal nerves are visible in the anterior two-thirds of the cornea and can be seen to branch

dichotomously and run here and there like minute cobwebs or thin white linen threads. The parenchyma is translucent, appearing greyish and stippled; within it can be seen nerves; at times full or withered blood vessels, infiltrations and so on through a whole range of pathological states are apparent. Descemet's membrane appears in folds under certain conditions and the endothelium is occasionally visible. Of greatest moment is the appearance of *keratitis punctata* or deposits upon the back of the cornea; even the smallest of these can be detected and not a single one need be missed. This is a matter of the greatest importance, not only in cyclitis of the ordinary type, but in suspected sympathetic ophthalmia. It can easily be noted whether or not an injury has actually penetrated the whole depth of the cornea.

In medico-legal work points of great importance will be noted later.

The Aqueous.

The aqueous is not visible under normal conditions, but in inflammatory states particles of exudate, leucocytes and so on can be seen floating about.

In a recent case of injury to the globe by a blow with a tennis ball, pigment was freely liberated from the uveal tissues and particles could be seen floating about in the aqueous. It was of absorbing interest to see these particles conveyed in a continuous journey by the convection currents of the aqueous.

The corneal surface being exposed is cooled by evaporation and the endothelial surface is thereby rendered cooler than the posterior portion of the anterior chamber and these convection circulatory currents are set up. Much light has been thrown upon the circulation of the aqueous by slit lamp investigation. Particles of blood are occasionally seen after injuries.

The Iris.

The iris and pupil furnish an immense field of ground for investigation. The trabeculae of the nor-

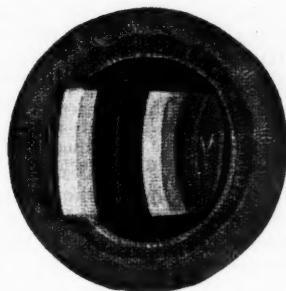


FIGURE II.

Illustrating the Appearance Seen When the Broad Beam is Thrown into the Eye. The light comes from the left. On the left we see the corneal prism sharp and clear-cut. Centrally the less distinct lens prism. Between the two is a dark space, the anterior chamber. The path of the beam through the anterior chamber can be faintly discerned in the drawing. To the right of the lens prism the architecture of the lens is displayed. All these structures are shown in sharp focus. In reality this is not the case. (After Harrison Butler.)

mal iris, the "frill" or area of the slight projection located at the *circulus minor* and the edge of the pupil are beautifully brought out. The minutest reaction to light is discernible. The *sphincter iridis* can be seen in the case of a blue iris and in nearly every iris which is subject to some atrophic degeneration. The proliferation of pigment from the uveal layer of the iris around the edge of the pupil is sometimes very pronounced in diabetics and some authorities claim to be able to diagnose the disease from the oedematous, puffy appearance of these pigment cells as seen with the slit lamp. Diseased states of the iris offer a magnificent opportunity for the apparatus to display its value. Atrophic states, both senile and degenerative, leave the iris almost transparent to light reflected from the lens. New vessel formation, muddiness of the surface, injuries *et cetera* are laid bare for examination. Filaments of persistent pupillary membrane are disclosed so frequently

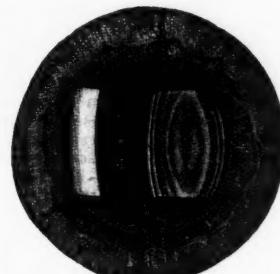


FIGURE III.

The same eye as in Figure II is illuminated by the narrow beam, showing all the structures in profile, in optical section. (After Harrison Butler.)

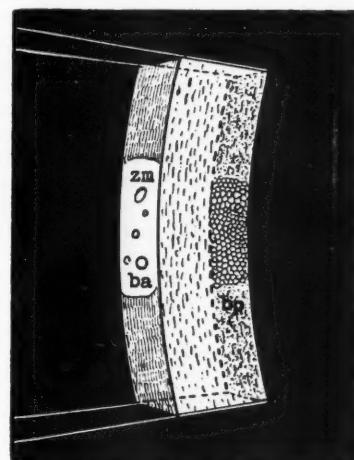


FIGURE IV.

This figure represents the corneal parallelepiped which the luminous beam cuts in the cornea. *zm*, *ba* = zone of specular reflection of the anterior band. In the zone of specular reflection of the posterior band (*bp*) is seen the mosaic of the endothelium. (After Gouiden and Harris.)

as to be regarded as a common factor—delicate little cobwebs can be seen running from the "Ruff" of the iris either to the capsule of the lens or right across the pupil to the "Ruff" opposite. Other congenital remnants associated with pupillary membrane are in the form of pigmented dots on the lens. Recently a patient was shown at a meeting of the Ophthalmological Society of New South Wales and clinicians were not able to determine whether dots clustered on the centre of the anterior capsule of the lens were congenital or due to an attack of iritis. The slit lamp examination would settle this point in a moment; this is an instance of the clinical value of the apparatus.

I had a case of medico-legal importance recently, the patient being a soldier who claimed pension for loss of vision of the right eye. His history was a gradual misty failure of vision after using a rifle, a cartridge "blowing back." He had no consciousness of immediate injury to

the eye beyond the usual amount of shock, but in a few weeks the eye lost its clear vision and gradually its sight pattered out with the appearance of a cataract. After an interval of some eight years he sought to establish effect and cause as above. The ordinary loupe examination did not reveal a definite corneal opacity, nor could any trauma be seen in the iris. The lens was of crystalline white opacity. Slit lamp examination disclosed a minute nebula in the cornea traversing the depth of the cornea and behind it a minute hole in the iris and behind this a small amount of pigment attached to the surface of the lens. There could be no doubt at all that he had suffered from a perforating injury with a minute spicule of material, probably metallic and assumed to be attributable to a defective rifle cartridge. Without the slit lamp, this man might have failed to justify his claim or the condition might have been attributed to concussion only. An X ray examination did not disclose the presence of any foreign body.

The presence of coloboma of the iris allows the suspensory ligament of the lens to be viewed.

Accidents such as blows with a fist or ball which rupture the sphincter or tear the root of the iris, liberate pigment and often display pretty pictures of particles floating about in the aqueous conveyed up and down by the convection currents. Such rare conditions as cysts of the iris, neoplasms, tubercles and so on would present a splendid field for examination. Posterior synechia can be examined and a quick determination made of their extent and the necessity for an iridectomy to avoid secondary glaucoma due to ring synechia can be decided with the full facts of the case manifested to the observer. It is not my purpose to stress all the possibilities of examination which the apparatus opens up.

The Lens.

For the lens the slit lamp has widened our appreciation of the anatomical structure and made a very great advance in medico-legal aspects. The anatomy is very complex and the beginner is at a loss to differentiate the numerous delineations of embryonic, foetal and adult nuclei, cortex and capsule into which the lens is anatomically divided. Lenticular opacities can be localized to the area in which they are formed. For instance an opacity situated in the very centre of the lens must have occurred at the very earliest stage of development because it is situated in the area formed by the embryonic nuclei; Lamellar cataract, due to disturbances by the foetal nucleus, indicates that the foetus was having a "rough spin" at the stage of life in which the affected fibres of the nucleus were developing.

DENNIS CONSIDEN, ASSISTANT SURGEON OF THE FIRST FLEET.

By JOHN MACPHERSON, M.A., B.Sc., M.B., Ch.M. (Sydney),
Lecturer in Therapeutics and Materia Medica,
The University of Sydney.

DENNIS CONSIDEN was Surgeon-General John White's first assistant surgeon in the first fleet. He came out on the *Scarborough* under Captain Marshall in charge of two hundred and ten male convicts. He was an ardent naturalist and prosecuted especially botanical research. Unfortunately

owing to ill-health he remained in the Colony for only a comparatively brief period. According to the "Historical Records of Australia" during his sojourn in the settlement:

He became the pioneer of pharmaceutical research and had discovered the anti-scorbutic properties of the native sarsaparilla and the value of an infusion of the wild myrtle in the treatment of dysentery.

For many years, however, he remained forgotten until one hundred and ten years after his departure, when the late Mr. J. H. Maiden named after him a species of eucalyptus, in 1904. *Eucalyptus consideniana* is known popularly as "peppermint," "messmate" or "white mahogany." This species is allied to the Sydney "peppermint" (*Eucalyptus piperita*). Thus only, beyond the references to him in the official files, is the name of this great man perpetuated. Considen claimed for himself the credit, generally assigned to White, of discovering eucalyptus oil and its therapeutic application.

Sir Joseph Banks was the illustrious and wealthy President of the Royal Society of England. He had been covoyager with Captain Cook to the Pacific Islands and Botany Bay, where he collected our remarkable flora. Hence the name of Botany Bay. Banks was the patron of all the sciences and the father of Australian botany. To him wrote Considen from Port Jackson on November 18, 1788, thus:

Sir: From the intimacy which subsisted between you and my friend Captain Charles Hamilton, I have taken the liberty of sending home some birds and a kangaroo skin, properly stuffed, to your care, to be forwarded to him as soon as possible. At the same time I beg your acceptance of five birds and a kangaroo skin, all properly prepared and stuffed. I have likewise sent two living opossums (one for you, the other for Captain Hamilton) and two beautiful paroquets alive (one for Mrs. Charles Hamilton, the other for your daughter). I sincerely wish they may reach you safe.

Understanding you were a naturalist, as well as a botanist, I have sent you some beetles, *viz.*, two species from South America; and some flower seeds (such as I could, at present collect in this country); and specimens of two sorts of gum, the production of this country, the one red and the other yellow. The first is the red astringent gum well known in England. The other I have taken the liberty of naming the balsam of New South Wales. These I have used medicinally and found them to answer my most sanguine expectations. I have sent you some of the "sweet tea" of this country, which I recommend, and is generally used by the marines and convicts. As such it is a good antiscorbutic, as well as a substitute for that which is more costly.

This country produces a variety of flowers and shrubs totally unknown in Europe; and five or six species of wild myrtle, some of which I have sent to you dried. An infusion of the leaves of one sort is a mild and safe astringent in the dysentery. We have a large peppermint tree, which is equal, if not superior to our English peppermint. I have sent you a specimen of it. If there is any merit in applying these and many other simples to the benefit of the poor wretches here, I certainly claim it, being the first who discovered and recommended them.

Many of the shrubs are now in bloom and many more have not yet ripened their seed. Therefore I cannot send you that variety I would wish; but I will make it my business during my residence here to send you some by every opportunity, should it be pleasing to you.

You are probably surprised I have not given you some account of the country *et cetera* when I have taken the liberty of addressing you at all. For this I beg leave to refer you to Captain Hamilton, to whom I have given a short sketch of it, together with my opinion.

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I had forgotten to say that the red gum is produced by two very different sorts of trees, and that the yellow gum is the production of a small tree of the palmette kind, the seed of which I have sent to you. It grows on a stalk, from six to twelve feet long, and very much resembling a cane, out of the centre of the top of the tree, which is from three to seven feet high, and the circumference from 18 to 24 inches. The external surface appears as if burned; but upon examination, it is only a black vein which, if powdered, becomes of a red colour.

I am, etc.,

D. CONSIDEN.

Memo of such things as I have sent to you and Captain Hamilton by the *Golden Grove*, Transport, of London (Wm. Sharp, Master): Eight paroquets prepared and stuffed; a nameless bird, prepared and stuffed; flying squirrel, prepared and stuffed; some seeds, all in one box; two live paroquets in a cage; two live opossums, male and female; two kangaroo skins stuffed; and some of the native spurs.

One might remind you that Cape Banks, one of the heads of Botany Bay, was named after Sir Joseph Banks, as was also the old Sir Joseph Banks Hotel, at Botany; also Bankstown and Banksia. Among the Australian flora his name is perpetuated in that wonderful proteaceous genus *Banksia* or native honeysuckle. In our avifauna his name is likewise applied to the fine red-tailed black or Banksian cockatoo.

The only other references which I can find concerning Considen are as follow:

Whitehall, 14 July, 1792.

The Right Hon. Henry Dundas to Governor Phillip.

You will grant permission to Mr. Dennis Considen to return to England, should his health still continue to require it.

Sydney, N.S. Wales,
16th Feb., 1793.

Lieutenant-Governor Grose to the Right Hon. Henry Dundas.

Your instructions relative to Mr. Considen are communicated to him, and he will return to England by the *Kitty*. I have on this occasion been obliged to direct Mr. Edward Laing, the surgeon's mate of the New South Wales Corps, to act as the Assistant Surgeon in the room of Mr. Considen.

Note that this despatch was forwarded to England by the *Bellona* which sailed for Canton on February 19, 1793. The recommendation for Laing's permanent appointment was not acted upon.

Sydney, 30th May, 1793.
Lieutenant-Governor Frans. Grose to the Right Hon. Henry Dundas.

Mr. Considen, whose health does not admit of his remaining any longer in the Colony, has taken his passage in the *Kitty*, according to the permission he received by the *Bellona*; and, as he has been constantly employed, either in this place or Norfolk Island, since the establishment of these settlements, I beg to refer you to this gentleman for any information you may require respecting our situation.

Navy Office,
5th March, 1794.

The Navy Board to (Evidently Grose.)

The *Kitty* Transport arrived at Cork on the 5th ult., after a passage of eight months and we send you herewith a list of the passengers arrived in her. . . . Mr. Dennis Considen, Surgeon to the Colony, Willm. Farr, Hosh. Buckley, servants to Mr. Cranston (Surgeon to H.M. Sloop *Discovery*, invalided) and Considen, and victualled; ordered on board by the Lieutenant-Governor.

This is the last record I can find concerning Considen, whose salary was £91 5s. per annum. As to whether White or Considen was the discoverer of the therapeutic properties of eucalyptus leaves, of native sarsaparilla and the other members of the Australian flora, is an open question. Considen definitely claims the discovery of the medical virtues of eucalyptus leaves and other plants. Dr. J. Fred. Watson in his "History of the Sydney Hospital" credits Considen with the discovery of the powerfully antiscorbutic properties of the native sarsaparilla and the use of an infusion of wild myrtle as an astringent in dysentery. Considen wrote to Sir Joseph Banks on November 18, 1788. On that very day White dedicated his book from Sydney Cove, Port Jackson, to Thomas Wilson, Esquire, as will be seen in the preface to his "Journal of a Voyage to New South Wales." It seems such a pity that miserable jealousies should have marred the good work of these two excellent men.

Grass Tree or Yellow Gum.

Now we might make some observations concerning the native vegetable products mentioned. The yellow gum or balsam was the product of our native grass tree or "black-boy." Six species of the genus *Xanthorrhœa* spp. occur in New South Wales. Some with their black stem surmounted by foliage from which issues the long rod-like flowering spike resemble in the distance and at twilight an aboriginal armed with a spear and carrying a bunch of foliage. Hence the name "black-boy." The resin was called "yellow resin" or "yellow gum-resin" or "acaroid resin," "Botany Bay resin" or "black-boy gum." Considen termed it the "balsam of New South Wales."

Xanthorrhœa hastilis and *Xanthorrhœa minor* occur about Sydney. The exudation is a sap which dries into a resin. It issues in tears or small globules from the top of the trunk at the base of the old decayed leaves. On breaking the stem, it may be gathered from each of the layers connecting the main trunk and leaves. It is yellowish or reddish in colour and on first exposure to air is pleasantly fragrant. It burns with a beautiful aroma. To the taste it is pungent, slightly bitter and astringent. It breaks with a glazed surface. It is insoluble in water, but soluble in alcohol, ether and caustic potash solution. The yellow colouring matter imparts a fine dye to silk. The resin and leaves have been used in the manufacture of illuminating gas. Medicinally the resin has been employed, sometimes combined with opium, in the treatment of dysentery and diarrhoea.

A popular ointment in Sydney at one time contained grass tree resin as an ingredient. The aborigines of the Northern Territory and elsewhere over Australia used it therapeutically. Some tribes used it to unite the edges of wounds and to fix the joints of spears, as well as to cement the handles to their mogos or stone tomahawks. It contains (according to the investigations of Professors Liversidge and Rennie and others), benzoic and cinnamic acids, para-oxy-benzoic acid, benzine, cinnamene and phenol.

Peonol has been obtained from the red variety of the "gum." This last-mentioned substance has also been found in the roots of the genus *Paeonia*, which is used medicinally in Japan. From the yellow variety another substance has been obtained, having an additional hydroxyl group. Picric acid can be obtained from grass tree resin. Prior to the war for many years very large quantities were exported to Germany to be used in the manufacture of high power explosives and, no doubt, during the war many of our troops were destroyed through the instrumentality of this picturesque feature of the Australian landscape. In the "Voyage of Governor Phillip to Botany Bay," published in 1790, we find the following (in connexion with the treatment of dysentery by red gum).

The yellow gum has been discovered to possess the same property, but in an inferior degree The yellow gum, as it is called, is strictly a resin, not being at all soluble in water; in appearance it strongly resembles gamboge, but has not the property of staining The resin is generally dug up out of the soil under the tree, not collected from it and may perhaps be that which Tasman calls "gum lac of the ground."

Native Sarsaparilla.

Considen's sweet tea was the native or wild sarsaparilla (*Smilax glycyphyllea*-Smith), not to be confused with the beautiful blue or purple false sarsaparilla (*Kennedy* or *Hardenbergia monophylla*). Both are climbers or creepers, but readily distinguishable in the absence of flowers by their leaves. Professor Rennie isolated the sweet principle of our sarsaparilla leaves as a glucoside, glycyphillin, whose decomposition products are phloretin and isoduleitol. It is therefore closely related to phlorizin from the apple, pear and plum trees. Jamaica sarsaparilla, used by pharmacists and at one time included in the British Pharmacopeia, is derived from the root of *Smilax officinalis*. These roots contain three saponin glucosides, the chief being smilacin or parellin—an acrid neutral principle. They also contain resin and a trace of volatile oil.

The native sarsaparilla has been described as alterative, tonic and antiscorbutic and was long employed medicinally in the early days of New South Wales colonization. In my younger days it was still popular, but now seems to be falling into disuse and oblivion. At one time it was a common article of trade by Sydney herbalists. A decoction or infusion was made from the leaves and considered more pleasant than the Jamaican or Central American sarsaparilla. The taste is at first sweet with an after bitterness. The late Dr. George Bennett, the grand old scientist of many years ago and a member of the Medical Faculty of the University of Sydney, in his "Gatherings of a Naturalist," published in 1860, states:

The leaves are sweet when chewed, resembling the taste of liquorice. A decoction of the plant is used as sarsaparilla (to which family it belongs). It would form an excellent beverage for the labouring class during the sultry summer months and well suited to the climate.

The prevalence of scurvy during the early days was astounding and correctly attributed to the

lack of fresh fruit and vegetables. During the voyage the incidence was very much less on account of the fruit obtained at Rio de Janeiro and Cape Town. In "The Voyage of Governor Phillip to Botany Bay," published in 1790, it is stated in connexion with scurvy:

Nor were esculent vegetables often obtained in sufficient plenty to produce any material alleviation of the complaint.

In the light of our present knowledge in all probability the homely geebung (*Persoonia*), five-corners (*Styphelia*) native figs and native currants (*Leptomeria acida*), which abounded in the vicinity of Port Jackson, as well as the fresh juice of the native sarsaparilla, contained sufficient antiscorbutic vitamins to have protected the whole community, had the surgeons but known it.

Sydney Peppermint.

Sydney peppermint is *Eucalyptus piperita*-Smith. Its habitat is the coast and tablelands of Queensland, New South Wales and Victoria. The oil sent to Mr. Wilson by Surgeon-General John White was one of the first of our country's natural products to be exported. What became of that particular specimen is not now known. Sixty-six years later the first eucalyptus oil factory was established in Australia by Bosisto. The first chemical investigation of eucalyptus oil was made by the French chemist, Cloez, in 1870 from oil yielded by a Tasmanian blue gum tree (*Eucalyptus globulus*) grown in France. The oil of the Sydney peppermint contains eucalyptol (cineol), phellandrene, peppermint ketone (piperitone), eudesmol and sesquiterpene. From piperitone have been manufactured synthetically menthol and thymol.

Red Gum.

In "The Voyage of Governor Phillip to Botany Bay," published in 1790, we find (pages 69-70), speaking of scurvy, which became very rife in the settlement:

Nor were esculent vegetables often obtained in sufficient plenty to produce any material alleviation of the complaint. In the dysentery, the red gum of the tree which principally abounds on this coast was found a very powerful remedy The tree which yields the former kind of gum is very considerable in size The red gum is usually compared to that called *sanguis draconis*, but differs from it in being perfectly soluble in water, whereas the other, being more properly a resin, will not dissolve except in spirits of wine. It may be drawn from the tree by tapping or taking out the veins of the wood when dry, in which it is copiously distributed.

It is not known which were the two different species of trees yielding the "red gum" referred to by Considen. Probably two eucalypts were indicated; but Mr. R. T. Baker, F.L.S., informs me that one was possibly *Angophora lanceolata*, an "apple gum" which is common around Sydney and is one of the largest kino yielders among the native trees. Almost certainly the bloodwood (*Eucalyptus corymbosa*) is one of them. This tree contains much kino in the bark and wood, in the latter case known as "gum veins." It was about the beginning of last century that a kino of New South Wales, similar to those from India and Africa, came definitely into use.

Dr. Thomson in 1843 said that much of what was found in the shops of Great Britain, was the product of *Eucalyptus resinifera*, a plant found in Van Dieman's Land, but the late Mr. Henry G. Smith, F.C.S., was of the opinion that from the reactions and appearance of the specimens recorded they were probably obtained from the "bloodwood." A sample of "Botany Bay kino" mentioned by Pereira as from *Eucalyptus resinifera*, was of a different class and from its reaction and appearance was probably obtained from a "stringy bark" or "peppermint." *Eucalyptus resinifera* is generally known as the "red" or "forest mahogany." Most likely the exudations of several species of eucalyptus were collected indiscriminately and not kept distinct in the early days and were comprehensively labelled as from *Eucalyptus resinifera*.

This species and *Eucalyptus gunnii*, the "ribbony gum," were known in Tasmania as cider trees, as their exudations yielded on standing by a natural process of fermentation a coarse kind of wine or cider which was intoxicating if drunk in excess. The aboriginal inhabitants were very fond of this beverage and both they and the white settlers in the early days of colonization used it as an intoxicant. It is recorded that the Lake Arthur blacks had a great drunken orgy with it at Christmas-time in 1825. The exudation of *Eucalyptus resinifera* resembles Malabar kino. It has much tannin and a red colouring matter. On the River Shannon in the Lakes District of Tasmania at certain seasons the natives tapped the tree like a maple. The sweet juice, saccharine and tasting like molasses, collected in a hole in the ground which was covered to keep away birds and other marauding animals.

Myrtles.

As to what Considen's myrtles were we can only hazard a guess. As in all probability he did not travel far afield, we must limit our speculations to the flora about Port Jackson and Botany Bay. *Eugenia australis* (syn. *myrtifolia*) was known as native myrtle and was found at Botany Bay by Banks and Dr. Solander. It also extends to Port Jackson. *Eugenia smithii*, extending largely over County Cumberland, is an allied species, but was termed after its aboriginal appellation "lilly-pilly" and not "myrtle." The bark of this species contains 28.6% of tannin.

Another species of eugenia occurring in New South Wales and Queensland is *Eugenia jambolana*-Lam. A vinegar prepared from the ripe juice of the fruit of this species is an agreeable stomachic and carminative; it is also used as a diuretic in India. The bark is a useful astringent. The expressed juice of the leaves enters into Indian medicine in various ways. The seeds have been reputed to be a powerful remedy in diabetes, but their true value has not yet been ascertained. In all probability they are of no real use.

Myrtus tenuifolia, described by Smith in 1797, was known as myrtle and grew around Port Jackson, extending to the Blue Mountains. There

are several other New South Wales species of *Myrtus* and *Rhodomyrtus*. *Bacchousia myrtifolia* is a native of Port Jackson, popularly called "native myrtle," "grey myrtle" or "scrub myrtle"; *Rhodamnia trinervia* occurs at Port Jackson; but according to Mr. R. T. Baker its leaves contain little or no essential oil.

Acknowledgement.

For much of this information I am indebted to the volumes in the Mitchell Library, the writings of Messrs. Baker and Smith and others.

THE HOSPITAL PROBLEM OF MELBOURNE AND THE COMMONWEALTH.

By D. M. EMBLETON, M.D. (Melbourne).
Honorary Physician to Outpatients, Children's Hospital, Melbourne.

FROM utterances in the press and elsewhere it would seem that the public and even some of the medical profession are wanting in a clear conception of the "hospital problem." It is psychological and economic (Appendix I). Sustained misconception jeopardizes the harmony between the public and the profession and the interests of both. It is a problem of supreme professional, public and national importance.

The solution of the problem is evolving without any collective professional sanction. Any solution which does not adequately reward and thereby cultivate the skilful employment of highest ability in maintenance of health—the most treasured possession of the individual—is an unsatisfactory solution.

Certain facts are relevant to a clear conception of the "hospital problem." Of the population 56% have neither accumulated wealth nor income which would prevent their admission to institutions maintained by Government grant (Appendix I). Hitherto the professions have relied for recompense on the spirit of public independence and willing endeavour to pay for services rendered. Of the people in Melbourne 40% now appeal to public institutions (Appendix II) and up to 60% will undeterred follow their example (Appendix I and V). Intermediate hospitals and intermediate beds in public hospitals are not valid remedies for relief of public hospital congestion or expansion. Executive staffs of public hospitals cannot collect money for nursing, let alone medical service (Appendix III).

The contributing system and the staff fund is quite inadequate payment and will only intensify professional difficulty (Appendix IV). Likewise community hospital principle is not applicable (Appendix VI).

Advances in popular standard of comfort in medical service and in prices generally all have contributed to the increase in cost of professional service.

The altered popular attitude to hospitals was clearly expressed by Mr. Stopford, Minister for Health in Queensland⁽¹⁾:

Hospitals are regarded in Queensland as services of equal importance to water reticulation and sewerage and not as charitable institutions for the poor.

In Victoria in 1922 *The Charities' Act* gave national consent that public hospitals were no longer solely charitable institutions. Chart IV shows how an impetus has thereby been given to their popularity and growth.

The tax upon the accommodation of public hospitals is such that the Charities' Board of Victoria promised⁽²⁾ to increase the public hospital beds in Melbourne by one thousand more or 50% and two weeks ago the Minister for Health promised definitely that the first half of these, five hundred, would be made available in association with the existing public hospitals.⁽³⁾ Thus 50% of the total nursing will be done in public institutions and when the whole thousand more beds are available, 60%. (This computation includes nursing done in private houses by trained nurses as well as that done in private and public hospitals.) Appendix II.

Dr. Argyle, who was Chief Secretary in the last Victorian Government (National), promised at Armadale that suburban outpatient departments providing domiciliary treatment would be established⁽⁴⁾ and this was reiterated by Mr. Love, Secretary of the Charities' Board at the Constitutional Club.⁽⁵⁾ These suburban outpatient departments are in operation now in two suburbs.⁽⁶⁾

These outpatient clinics will hasten the popularity of public hospitals and the extension of their service to 60% of the people. Sir Frank Clarke, President of the Legislative Council, publicly laid stress upon the disadvantages to which the wealthier classes were submitted in provision of hospital accommodation⁽⁷⁾ and he commended the idea that public institutions should be open to the use of all.

Trade unions refuse to subscribe to public hospital funds, declaring that these hospitals should be provided by the Government. From political administration, either national or labour, we can expect only continued extension of public hospital facilities, that is, more inpatient beds (public), suburban outpatient departments, baby health centres, antenatal clinics, tuberculosis bureaux and district nursing societies. Suburban outpatients will enormously curtail both private and consulting practice. The financial position of 60% of the people does not exclude them from Government assistance according to accepted standards of the

GROUPS

I
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II^B
III^A
III^B

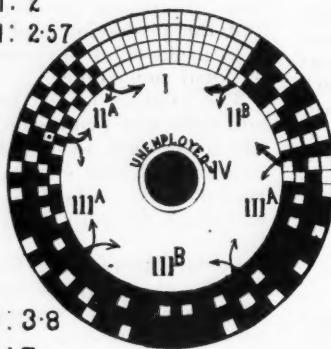
1: 2.57

III^A
III^B

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III^A
III^B

1: 1.7



GRAPH I is an analysis according to responsibility and income of 90% who pay no income tax, of 90% who live in private dwellings. It is explained in Appendix I.

moment and yearly a greater proportion of the people choose to accept this assistance (see Graph IV).

Can the medical profession maintain its professional and social dignity and carry on without recompense this wide expanse of free service unparalleled in any other profession, business or industry.

It will seriously influence alike the function and opportunity of those who do and those who do not serve public institutions. It would seem that astute legislators recognize that there is little need for expensive national insurance if the present hospital policy develops satisfactorily though insidiously. Remuneration of the profession in association with public hospitals will not be discussed unless the profession raises the question. The ability of hospital staffs to discuss the question of remuneration with hospital executives depends on the loyalty of those who hold only minor or no hospital appointments. The interests of these latter

too must be carefully considered and guarded.

No single aspect but the whole relation of the profession to the public must be simultaneously reviewed. Adequate consideration being given to public requirements on the one hand and diverse professional interests on the other.

It seems urgently necessary to offer to the whole profession the opportunity to coordinate its outlook and requirements and negotiate with hospitals and public in accordance therewith.

Appendix I.

During 1907 in the course of a process, Crown *versus* McKay, an inquiry was held into the cost of living at Sunshine and thereby it was decided that the money paid to a non-skilled labourer working full time, should be such as to provide him, his wife and three children with the necessities of life. With the war, alteration in trade relations, appeals to tribunals and other changes the cost of living and the wage rose together. In 1919, owing to industrial unrest at home and the spirit of Bolshevism abroad, W. M. Hughes in his policy speech at Bendigo announced the intention to appoint a Basic Wage Commission to stabilize the purchasing power of the wage. This intention was enunciated in the following words:

We have long ago in Australia adopted the principle of the minimum wage. Now once it is admitted that in the interests of the community that such a wage should be paid as will enable a man to marry and bring up

children in decent, wholesome conditions and that point has been settled long ago, it seems necessary we must devise better machinery for paying such a wage.

There is no doubt from this utterance that the basic wage is intended to provide the necessities of life, among which medical and nursing attention in sickness is most important. It was never intended that wage earners or others on behalf of them should beg at street corners for nursing assistance or impose on the medical profession for free medical service. The national sanction for these processes died in 1907 with the determination of the

and five pence for food; and nine shillings and seven pence for light, clothes, boots, furniture, utensils, rates, life insurance savings, accident or benefit societies, unemployment union pay, books, papers, fares, tobacco, sickness, death, domestic health, school requisites, amusements, holidays and the remainder for intoxicating liquor.

In 1922 Mr. Piddington after three years' inquiry lightly deals with the subject, as follows:

Again the majority of employees are members of a benefit society (this is not true). And the lodge subscription covers medical attendance and medicine ordered by the doctor for the bread winner. . . . The Commission has accordingly taken from the statistical data provided by the officials dealing with affairs of friendly societies the average contribution for lodge benefits as being fair, convenient and just measure of provision to be included in the cost of living for sickness in the typical family one shilling and three pence a week).

If we refer to the annual report of the Actuary to Friendly Societies,⁽¹⁰⁾ we find this one shilling and threepence allocated as follows: Three pence for lodge administration (lodge secretaries *et cetera*); sixpence for sickness and funeral benefit; one and a half pence for medicine (dispensary); four and a half pence for doctor.

Four and a half pence per week is the only provision made for medical and nursing attention, that is, one pound *per annum*.

By employers it is contended that sufficient money is paid to meet these contingencies. This contention may be correct, if money were saved in youth to meet the expenses of maturity. We are quite aware that in adequate degree this does not occur.⁽¹⁰⁾ Voluntary saving will always probably be unsatisfactory—55% of industrial life insurance policies lapse within five years of commencement. As a profession we know that when sickness arises, inadequate provision has been made and we supply the deficiency.

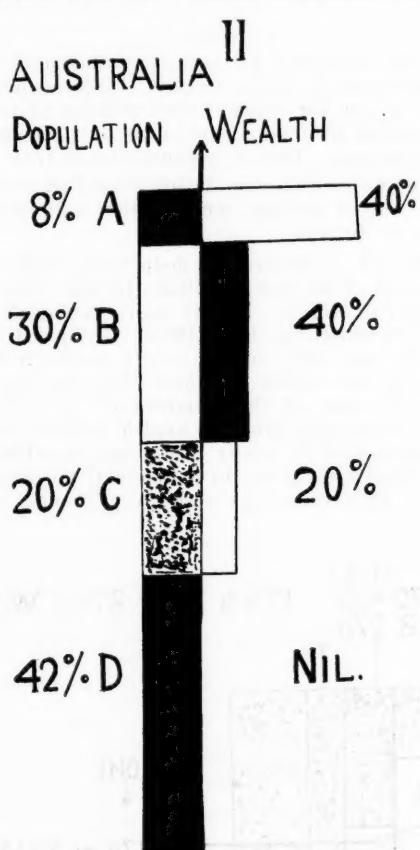
Income divided by responsibility is usually regarded as the index of ability to pay for service. If we analyze the population, therefore, according to income, we find that 10% of the people who earn, pay income tax (statutory exemption £300 and allowances) and they support 12% of the population. The remaining 90% are classified according to responsibility⁽¹¹⁾ as shown in the accompanying table and Graph I.

Group 3 B together with the unemployed equals one fourth of the population. The members of this group have a large responsibility in proportion to their income and largely create our hospital problem.

Group 3 A together with 1A, 3B, and the unemployed equal considerably more than one half of the population. These people find it difficult to provide all the contingencies of sickness.

Those of Group 2A are usually kept busy with the time payment system. Those of Group 2B, assisted by Group 1, do not find the same difficulty in providing for themselves in sickness.

Those of Group 1 have relatively little sickness and do not save their money. Ten to twelve years



GRAPH II is an analysis of the population of Australia according to the distribution of wealth. It is explained in Appendix I.

right to sufficient money for adequate provision of necessities. The perpetuation of reliance on begging and free service has only one national excuse, that is habit which by age has been transmuted into custom, but if we accept the declared national principle, provision of necessity, it has no justification. If we examine the findings of Justice Higgins in 1907 and Mr. Piddington in 1922, we find the principle of provision is accepted, but the actual provision is inadequate and the omission has ever since been made good mainly by imposing on the medical and nursing professions.

In 1907 forty-two shillings per week were to provide seven shillings for rent; twenty-five shillings

TABLE SHOWING DISTRIBUTION OF 90% OF PERSONS REFERRED TO IN THE TEXT AND IN GRAPH I.

Group.	Population	Workers.
1	18% of them are unmarried, young, healthy workers. They have little illness. The average age of marriage is male 28, female 26. Till then they spend freely. They subscribe very little to the upkeep of the medical machine.	43% of workers and receive 42% of the wages. 1 wage for 1 person.
2A	8% are newly married, investing in houses and time payment furniture <i>et cetera</i> . They do not remain long in this group.	10% of workers draw 11% of wages. 1 wage for 2 persons.
3A	15% are families increasing in size, babies arriving, growing demands, an income which remains stationary; illness becomes a feature of their requirements, midwifery <i>et cetera</i> .	9% of workers, 11% of wages. 1 wage to 3.8 persons.
3B	21% are large families (full complement of children), all still young, requiring medical attendance for measles, pneumonia, rheumatism <i>et cetera</i> .	8% of workers, 9% of wages. 1 wage to 7 persons.
3A	15% are families, some have reached the age of sixteen years and are beginning to care for themselves. They still require medical attendance.	10% of workers and 11% of wages. 1 wage to 3.8 persons.
2B	13% are families with children grown up, some are dependants, unmarried women <i>et cetera</i> and old people, requiring a good deal of medical attention.	12% of workers and 15% of wages. 1 wage to 2.57 persons.
Unemployed	9% are single and married, with and without dependants; they are more liable to get sickness from relative privation.	7% of workers and no wages. 1 earner to 2.48 people.

are spent in this group without responsibility. There is no reason why those of Group 1 should not save. They will not voluntarily do so.

Thus it is seen in analysis according to income for 90% that 18% of the population Group 1 get 40% of the income and have no sickness; 60% of the population (Groups 3A, A, B and unemployed) get 30% of the income and most of the sickness and nursing.

Thus we account for rash spending on the one hand and inability to pay on the other.

Wealth.

We are reminded, however, that income is not a true criterion of ability to pay. People should not expect to pay for concentrated activity of nursing and medical profession out of current income, but out of savings. This is reasonable and true.

If we analyse the population according to ability to pay out of savings, we find the distribution of wealth, as follows.

Graph II is derived by deductions from "Commonwealth Year Book," 1926, Income Tax Commissioner's Eighth Report and "National Dividend," by Sutcliffe, July, 1926. Groups B and C have 40% and 20% of the wealth respectively, yet owing to the method by which this table has been produced, some of the members of each of these groups have little tangible wealth, as their savings are represented by equity in cottages in which they live. Others again are in a financial position comparable with those of Group A. Though such a

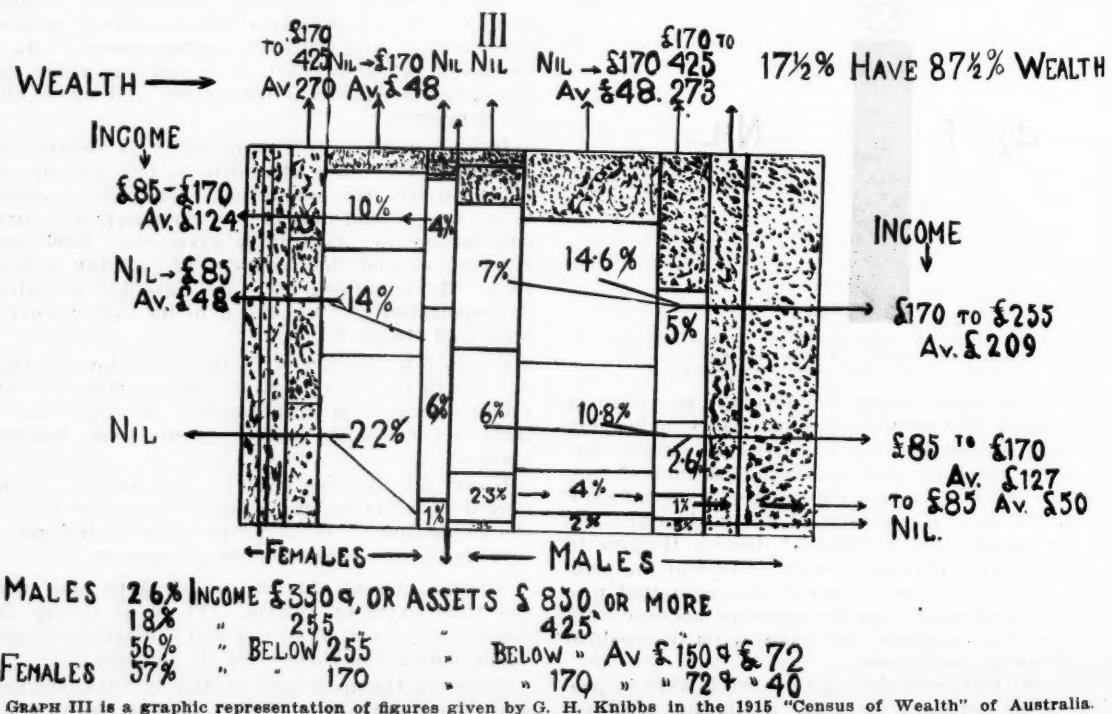


table must be a rough analysis, it goes to show that 40% have access to little or no tangible wealth.

G. H. Knibbs in "Census of Wealth," 1915, showed that 87.5% of the wealth was owned by 17.5% of the people. In a recent publication⁽²²⁾ it is stated that the American Government Commission on Industrial Relations accepted the following figures in 1916: 2% of the American people owned 60% of the wealth; 33% owned 35% of the wealth and 65% owned 5% of the wealth and the disparity was held to be now greater than ten years previously.

Wealth and Income.

Again it might happen that those who have no wealth have income and those who have no income have wealth, but in either instance can pay for service.⁽¹³⁾ I refer now to Graph III. It is a graphic representation of tables given in the "Census of Wealth," 1915, by G. H. Knibbs. The figures are transmuted to give 1925 money value instead of 1915 ("Commonwealth Year Book").

Concerning the census of wealth and other statistics, shadows are cast upon their infallibility. In clinical study we find analysis of a series is a fair guide for what is happening in any particular epidemic. The larger the series, the more reliable the outlook. So it is with census returns. This census return was based on an 80% or larger sample. No section, except juniors, could be expected to be unique in avoiding or failing to render a return. Objection is raised to its reliability, as it was achieved for the purpose, if necessary, of taxation in the face of national danger. Returns, probably most likely to be inaccurate, would be those dealing with larger accumulations of wealth liable to taxation, whereas our endeavour is to discover what proportion of people cannot pay and are entitled to public hospital assistance. Those with smaller incomes and smaller accumulations would be more liable and more able to render

correct returns. By reference to this table we conclude that 56% have neither income nor wealth sufficient to exempt them from the contributing system, that is to say they have less than £300¹ in wealth and the basic wage or less for income.

The following points should be noted:

1. The 1915 census is applicable to 1926 conditions, if allowance be made for increase of population (20%) and for change in the effective value of money during that period.

2. Savings bank deposits have increased from 1916 to 1926 from £98,863,621 to £194,350,606. This is usually declared to be evidence of thrift. Having regard to 20% increase of population and alteration in wages and effective value of money from

1144 to 1860 index value during this period, £98,000,000 in 1916 is the same as £194,000,000 in 1926, without making any allowance for interest which is paid, which should have accrued and which has been spent. In other words, the population is spending more than it earns.

Appendix II.

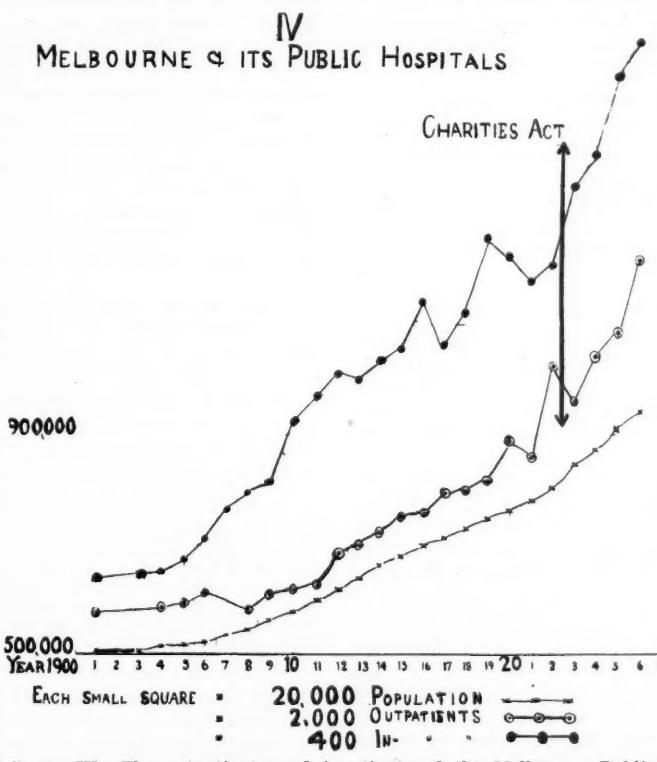
Hospital experience shows that 40% of the people are without tangible wealth. This figure is arrived at as follows. The public hospital beds in Melbourne⁽²⁾ number 2,022.² The intermediate beds at "Epworth," "Bethesda" and "St. George's" number approximately 200. The total is 2,222. At Melbourne Hospital⁽¹⁴⁾ and at "Epworth" the

ratio of trained nurses to patients is one to ten and this is probably maintained throughout. Therefore, the number of patients and trained nurses is 2,250 and 225.

The number of private hospital beds, excluding the intermediate beds previously mentioned and including those at sanatoria is 1,900. The ratio of patients to trained nurses at a maximum is probably five to one. Hence 1,900 patients have 380 nurses.

¹ It is noted that the Old Age and Invalid Pensions Act entitles people with £300 wealth to Government assistance.

² The ratio 2,022 : 3,300 therefore can be safely construed as meaning two public patients to three private patients.



GRAPH IV.—The outpatients and inpatients of the Melbourne Public Hospital are charted against the increasing population for twenty-five years. The vertical arrow in 1922 is the point at which the Charities Act was passed, consenting that public hospitals were no longer only charitable institutions.

The total number of nurses in hospital is approximately thus 600.

The nurses registered by the Trained Nurses Board are 3,200.⁽¹⁸⁾ Of these 500 are either married, out of the State, in other employment or otherwise ineffective (the approximate estimate by the Secretary of the Trained Nurses' Board is more than 400). This reduces the total to 2,700. One twelfth of the year is occupied in leave or time spent between cases. The total is thus reduced to 2,500. As a minimum 700 will be occupied in attending 1,654 registered private hospital beds in the country⁽¹⁵⁾ and in public and private nursing for 800,000 persons outside the metropolis. The total is now 1,800. The number employed in public and private hospitals as shown above is 600. There are thus 1,200 nurses available for private nursing in Melbourne. The private hospital and intermediate beds number 2,100 and those for private nursing 1,200, making a total of 3,300.

Two corrections are necessary:

1. A certain amount of the work done in public hospitals is the occasion for admission into private hospitals (*tonsils et cetera*).

2. The registered number of private hospital and intermediate beds in Melbourne is 2,095, but not the daily average of inmates, which will be somewhat below this.

Appendix III.

The patients are described as being without tangible wealth for the following reasons. Inquiry at five of the leading hospitals⁽¹⁷⁾ revealed that while all endeavoured to collect as much money as they could from patients, the returns, compiled independently, were uniform.

Of the Melbourne Hospital patients⁽¹⁸⁾ 3·2% paid £2 per week or more, 6·6% paid from £1 to £2 per week and 90% paid less than £1 per week or paid nothing. At the Alfred Hospital the figures were 4%, 7% and 89%. At the Queen Victoria Hospital the figures were nil, 31·8% and 68·2% (exclusive of midwifery). At the Homœopathic Hospital the figures were 4·6%, 9·3% and 86·1%. At the Women's Hospital patients in the gynaecological wards paid on an average ten to twelve shillings a week and patients in the midwifery wards paid half the maternity bonus. These figures show that the patients were unable to pay. The figure 40% conforms to American experience, as given in the American Hospital Census of 1925.⁽²³⁾

Appendix IV. Contributing System.

According to "Census of Wealth," 56% of the population are entitled to appeal and I believe will appeal to public hospitals for assistance. National consent was given in 1922 by the *Charities' Act* that public hospitals were not any longer solely charitable institutions, but could receive from patients payments in proportion to their means. Examination of Graph IV shows that since that date the rate of increase in the use of these institutions has accelerated very appreciably. In other words, national consent to the contributing system

has given momentum to its application. The present 40% treated and prospective 56% who may claim gratuitous assistance have created a burden on the energy and finance of the profession and an anxiety for the future. This has induced the leaders of the profession to commend the principle of the staff fund grudgingly accepted by the imperial association. If we were fortunate enough to create the arrangement whereby one half of the patients' contributions to the hospital were passed to the staff fund, it would mean throughout the Commonwealth that the profession would receive 10% of the cost of nursing, for medical attendance six shillings to eight shillings a week per patient.⁽¹⁹⁾ This could in no sense be adequate to the profession except for the fact that practically all routine work is done by an almost unpaid intern staff, whose members leave every year to join the great majority of the profession, working among the other 60% of the people to collect sufficient money to pay for services rendered to both public and private groups. But even now we know that the financial condition of some members of the medical profession creates the position that arrival of a patient is regarded as a very necessary opportunity, with the result that the friends of the poorer patient will more and more seek safety in the precincts of the contributing system.

Referring to Graph II, Groups B and C will partly fade into D. D will represent 56% and A, B and C 44% of the population, with a still more exacting individual burden for the individual of A, B and C or a profession in financial difficulties. It is not the people in Group D that at present are clamouring for more public hospital accommodation and more intermediate beds, but those of B and C.

At midnight recently I was called to see a man with heart failure. He believed in leeches and only one among local chemists had any and he had one dozen. The adult son of the patient paid nine shillings for these. We required another dozen and application at the Friendly Societies' Dispensary was successful. They cost two shillings and sixpence. My companion now has the idea that two shillings and sixpence is the price of leeches and nine shillings is extortion.

So will the comparison be created between cost to contributing patients on the one hand and private and intermediate on the other. The staff fund will not only be inadequate as remuneration, but a very dangerous weapon of comparison.

Appendix V.

In country districts where public hospitals are conveniently available to the public, 60% of the people make use of them.^{(20) (21)} According to the National Insurance Report, public hospital facilities are more readily available in other States than Victoria.

Appendix VI.

The public hospital clientele is now 40% and will rise to 60% of the population. They pay 20% of cost of nursing. If the total cost of nursing for ten patients is £50 and six of these pay one-fifth of their own share, that is £6, the remaining four have to pay £44, in addition to which they pay for the medical attention to the whole ten.

It would be difficult to finance a community hospital system on this basis; the head cannot carry the tail.

Appendix VII.

It is computed the whole cost of medical nursing and research expenditure would in Victoria be approximately £4,500,000 annually. Victorians spend £14,000,000 a year on motor cars, half of which is for pleasure, without estimating the cost of road maintenance. They also spend £6,500,000 a year on beer and spirits.

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OCULAR SPASMS IN EPIDEMIC ENCEPHALITIS.

By W. S. DAWSON, M.D.,
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AMONG the many striking sequelae of epidemic encephalitis there may occur a spasmotic conjugate deviation of the eyeballs, most frequently in an upward direction, less commonly downwards or sideways. Attention has been called to this phenomenon by Wimmer⁽¹⁾ who found that fatigue and emotion are important factors in precipitating the attacks. The patients usually suffer from the Parkinsonian syndrome. During the crises which may last from a few seconds to many hours, there is inability to alter the position of the eyeballs in spite of great discomfort. A more complete analysis of the condition has been made by Roger and Reboul-Lachaux⁽²⁾ who confirmed the observations of Wimmer. In addition they described both tonic and clonic spasms; these may be: (i) simple in

which the eyes move in one and same direction, (ii) variable in which the direction of movement is not constant, (iii) oscillating, characterized by to-and-fro movements, (iv) complete, characterized by a fixed forward stare. In the clonic forms there are convulsive movements of the eyeballs. The authors point out that the attacks may be associated with labyrinthine and other disturbances. Rest and quiet and the administration of stramonium or scopolamine are recommended for the alleviation of the symptoms. The authors also record satisfactory results from translabyrinthine galvanization.

The following case recently came under my observation in the Psychiatric Department of the Royal Prince Alfred Hospital.

CASE I.—The patient was a male, aged twenty-one. Two years ago, while at work, his eyes "turned upwards" for several minutes. This recurred at rare intervals. Three weeks before coming under observation his eyes remained fixed in an upward direction for several hours and the patient thereupon sought medical advice. He felt quite well in other respects. A day or two after the extraction of several very carious teeth it was noticed that his movements were slow; at the same time he complained of stiffness in his limbs and of an inability to walk at his usual rate. The Parkinsonian syndrome developed further during the fortnight following the extraction of teeth and there were several attacks of ocular spasm. The condition was relieved by hyoscine from which the patient acknowledged great benefit. Omission for three days of the dose of 0.6 milligramme ($\frac{1}{100}$ of a grain) by the mouth twice daily was followed by the return of ocular spasms and more pronounced Parkinsonism.

In a series of twenty-seven successive patients with post-encephalitic Parkinsonism admitted to the wards ocular spasm occurred in one instance.

CASE II.—The patient was a female, aged nineteen. She complained of stiffness in the limbs two years previously, also of tremors of the arms. Almost six months later her eyes began to "look up" and she could not "bring them down." Physical examination revealed the presence of the Parkinsonian syndrome with slight strabismus and lateral nystagmus. Ocular spasm occurred on two occasions during her stay in hospital.

Of forty patients admitted to Broughton Hall with a definite history of epidemic encephalitis or suffering from the chronic stage, three gave a history of ocular spasms.

CASE III.—The patient was a male, aged twenty-one, who gave history of attacks of "looking up" about once a week and later of "looking down." Parkinsonism developed a few months later.

CASE IV.—The patient was a female, aged thirty-three. She complained that her eyes became fixed in a stare two or three times a week and declared that she felt very emotional at those times. The Parkinsonian syndrome was present. The spasms developed about five years after acute encephalitis.

CASE V.—The patient was a female, aged twenty-two. She suffered from the Parkinsonian syndrome five years after acute encephalitis and she had attacks of ocular spasms in both and upward and downward directions with crises of emotion.

Attention is called to the fact that ocular spasm may be complained of before other physical signs have developed and, especially when emotional reactions are associated, may be mistaken for a functional manifestation.

Acknowledgement.

I am indebted to the Honorary Staff of the Royal Prince Alfred Hospital and to Dr. Evan Jones, of Broughton Hall, for access to their case records.

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THE SURGICAL ANATOMY OF THE PELVIC FASCIA.¹

By W. G. CUSCADER, M.D., F.R.C.S.E.,
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 Melbourne.*

IN ordinary dissecting material the important musculo-fascial bands which form the support of the uterus, are difficult or in most cases impossible to demonstrate. It is necessary first that the material be very fresh and secondly that no strong formalin be used in their preparation. Most of the material which forms the subject of this paper has been prepared by a modified Kaiserling method. If the effect of strong formalin on the bowel in ordinary subjects is remembered, it is possible to imagine its effect on the unstripped muscle of the pelvic fascial planes. All of these planes are perhaps most easily demonstrable in the living subject in the course of operative work.

In the first dissection (see Figure I) the osseous pelvic wall has been removed between a point two centimetres from the middle line and a line drawn from the anterior inferior spine of the ilium and the lesser sciatic notch. The peritoneum has been removed and the subperitoneal fatty tissue. The vessels and the ureter have been removed and the urinary bladder lifted up against the *symphysis pubis*. This exposes the two most important structures in pelvic surgery, the transverse ligament of the cervix and the pubo-cervical ligament. The transverse ligament has been the subject of much debate and no little misunderstanding.



FIGURE I.

This figure is an illustration of a dissection made to show the transverse (or cardinal) ligament. The osseous pelvic wall has been removed between a line two centimetres lateral and parallel to the symphysis and a line drawn from the anterior inferior spine of the ilium to the lesser sciatic notch. The peritoneum, subperitoneal fatty tissue, the vessels and the ureter have been removed. The urinary bladder has been lifted against the symphysis. The subject was forty-six years of age. A = pubo-cervical ligament; B = pubic bone; C = uterus; D = transverse ligament.

by these four bands. The transverse ligament tends to hold the cervico-vaginal junction upward and backward. The pubo-cervical band takes a smaller, but no less important part in suspending the uterus and also forms the support of the bladder. When the rectal ampulla fills, the tension of the transverse ligaments tends to draw the uterus well up out of the way; this is well seen in the dissection in which the rectal ampulla is distended. The four bands form the springs of the car, the *levator ani* is the shock absorber, but does not supply the real sup-

Starting at the lateral borders of the supra-vaginal cervix and the lateral borders of the uterus are cellular expansions elastic and muscular, forming a thick matted layer reinforced at certain points. Around the neck of the vagina it is thickened to form the parametrium (Koch). The transverse ligament of the cervix has been described as being attached to the side of the cervix, vault and lateral fornices of the vagina and continuous with the fibrous tissue which surrounds the pelvic blood vessels. It has been described as being composed of bands of fibrous tissue and unstripped muscle, forming part of the visceral layer of pelvic fascia and arising in the neighbourhood of the ischial spine. According to some anatomists the ligaments form sheaths for the uterine arteries which reach the uterus at the same level and are continuous with the hypogastric sheath. Two other cords called the pubo-cervical ligaments (or perhaps better we might follow Bonney and call them pubo-cervical muscles) pass from the bone on the postero-inferior aspect of the pubic bone lateral to the symphysis to be attached to the cervico-vaginal junction. Their more superficial fibres are carried over the ureter to form the roof of the ureteric canal, that trap for those who seek ureters. The fascial ligaments which suspend the uterus, have no special peritoneal covering, but the utero-sacral ligaments form a posterior border to the transverse ligaments. The level of the uterus is maintained

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¹ Read at a meeting of the Melbourne Gynaecological Society, September 29, 1927.



FIGURE II.

This represents a dissection from an older subject, aged sixty-five years. The ureter and uterine artery have been displaced to show the transverse ligament. In this subject there is more fibrous tissue, but still essentially muscular. A = uterus; B = rectal ampulla; C = uterine artery; D = ureter; E = transverse ligament.

port. The uterus cannot be drawn up in a pan-hysterectomy until the transverse ligaments are divided. The ligaments should be tied at operation, the large veins which cause such troublesome haemorrhage, are well seen in the second dissection (see Figure II). The part taken by the vulva in uterine support should not be forgotten; loss of perineal support does not necessarily cause prolapse, but imposes extra strain on the supports of the uterus and exposes them to extra strain.

The pubo-cervical ligament is usually torn during delivery, congenital weakness being a rare phenomenon. The ligament is usually torn transversely. The subsequent cystocele is a hernia through the pubo-cervical ligament. In the repair of the hernia it matters little about cutting the vaginal mucosa in triangles and diamonds, the hernial aperture must be repaired. In dissecting out the hernial aperture the surgeon is struck by the wide variations in size of the aperture. Overlapping or at least wide surfaces of apposition should be the ideal in repair.

In the case of the transverse ligament I doubt if it is often torn, it more usually stretches as the result of subinvolution chronic infection and softening of tissues. As it stretches, it allows the uterus to get more into the axis of the pelvis and the intra-abdominal pressure is more directly applied to the uterus in a position of increasing disadvantage; sometimes chronic inflammation causes shrinking instead of stretching of the transverse ligament.

Chronic inflammation is followed by fibrosis. When this occurs we have the cervico-vaginal junction drawn up and back. We then have that extremely difficult form of acute anteversion.

The dissection (see Figure II) shows well the relation of the uterine artery and the ureter to the transverse ligament. It is a matter of no great importance if the uterine artery is tied during some plastic operation, but to tie the ureter is a much more serious matter. I am convinced that the ureter is frequently tied in operations in which a wide bite of parametrial tissue is taken up with a needle. I have seen *post mortem* examinations of two cases in which the ureter has been tied on both sides with anuria and death. Mere pushing up the bladder does not always clear the ureters in the living subject, in the dead subject it is very difficult to clear the ureters out of the way in this manner. I have always preferred to dissect out the ligaments and either: (i) stitch their anterior surfaces together in front of the uterus, drawing the cervico-vaginal junction upward and backward or (ii) remove the uterus and bring the cut edges of the ligament together. This is joined to the cut edges of the pubo-cervical ligament, making an entirely new floor. That form of prolapse which follows a pan-hysterectomy requires for its cure a very complete dissection of the pelvic fascial planes, with a somewhat similar reconstruction of the pelvic floor.

At a recent meeting someone asked the cause of recurrent rectocele. A rectocele is a hernia of the rectum through the recto-vaginal fascia. The



FIGURE III.

This represents a dissection of a fetus to show the transverse ligament. The uterus is pinned forward to the region of the symphysis to put a strain on the ligaments and to render them more easily visible. A = transverse ligament.

margins of the aperture must be dissected out and apposed. Since I have used mattress sutures and overlapped the edges, I have had better results. The recurrent hernia takes place through the aperture in the fascia above the converging fibres of the *levator ani*. The recto-vaginal fascia is attached to the perineal body below and above it is attached to that portion of the pelvic floor which forms the floor of the pouch of Douglas, stretching from the rectum to the vagina beneath the peritoneum.

The recto-vaginal fascia has in all probability the same origin as the fascia of Denonvilliers in the male, that is, it is formed from the obliterated portion of the recto-vaginal pouch of peritoneum which in the foetus extends to the perineum.

A true rectocele is a relatively uncommon lesion. The perineum may be torn most extensively and even the rectum torn without causing a rectocele, provided the support of the rectum is not torn. At the edge of the pubo-rectal fibres of the *levator ani* the edge of the genital hiatus, the pelvic fascia (here known as the *levator ani* fascia) turns and becomes continuous with the fascia covering the outer surface of the *levator ani*, known as the anal fascia. Five fascial planes meet and fuse at this point. This is the main point of fixation for the lower third of the vagina. Tears in this neighbourhood give rise to the condition known as urethrocele. Sometimes, however, the sphincter of the urethra is deprived of its fixed point without the production of a definite urethrocele, merely a slight slipping down and forward of the meatus is all that can be noticed. The patients in these circumstances often have most troublesome incontinence. The result of the repair of the fascia and the triangular ligament and the restoration of a fixed point for the *sphincter urethrae* are usually excellent. Prolapse may occur from defects of innervation, this is seen in *spina bifida* and injury to the fourth sacral nerve. The muscular and elastic character of the uterine supports is well seen in those cases of prolapse following uterine tumours and marked ascites. Sometimes following paracentesis and the consequent fall of abdominal pressure, the uterus is drawn up again into the vagina and the prolapse cured. The part played by inflammation in rectocele (Viet) and enterocele is open to doubt; it may at times be a factor in weakening the fascia and permitting descent.

Finally, I should like to show a dissection to show the transverse ligament in a foetus. The pelvis of the foetus was prepared by a modified Kaiserling method of preparation (see Figure III). A sagittal section of the pelvis was made. The peritoneum has been stripped from the pelvic wall and drawn forwards along with the rectum and the cervico-vaginal junction. The tension has caused the ligament to stand out very distinctly.

The last edition of Cunningham's "Anatomy" refers to the transverse ligament as the cardinal ligament. It is possible that now this name may come into more general use. I should like to refer to the work of Arthur Nyulasy, who described them as cardinal ligaments. Dr. Nyulasy correctly de-

scribed the ligaments as fibrous. Though there is more fibrous tissue in the ligament in the dissection of the elderly woman, in all the essentially muscular character is obvious.

Acknowledgement.

I desire to express my thanks to Mr. Preston of the Melbourne University Anatomy Department for the very excellent photographs he has made of my dissections.

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Reports of Cases.

A PATHOLOGICAL CURIOSITY.¹

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Some time ago I received from the Mental Hospital, Callan Park, the brain of a general paralytic for examination. Nothing special had been noted *post mortem* and pieces of the heart, spleen, kidney, liver and pancreas were also included for examination. Beyond the usual sclerosis and degeneration commonly found in general paralysis of the insane, nothing noteworthy was seen in these organs. The heart muscle fibres however were somewhat separated by oedema. When longitudinal sections were made through both the cerebrum and cerebellum, large spaces or loculi were very evident, varying in size from a few millimetres to four centimetres.

These spaces for the most part appeared to be dilatations of existing spaces such as between adjoining gyri beneath the pia-arachnoid and the folia of the cerebellum, and in the brain stem. They were apparently situated around some blood vessel dilating the potential spaces of the perivascular sheath. In a few instances this statement may not hold good. In nearly all the spaces strands or shreds of fibrous tissue crossed the cavities.

The general appearance at once reminded me of an illustration I had seen long ago in some old surgical or pathological book and entitled "*état crible*." This picture showed a portion of the cerebrum apparently riddled with holes of various sizes and this condition was said to be common in general paralysis.

On attempting to find this illustration I was not successful, nor did an examination of the indices of some forty or fifty modern and ancient books on pathology or surgery afford much help. In all there were found but three or four allusions to "*état crible*."

Stengel in his "Textbook of Pathology" about 1880 under thrombosis and embolism of the brain describes this condition as being less severe in the white matter than in the cortex where the vascularity is so much greater so that

¹ The specimen described herein was shown at a meeting of the New South Wales Branch of the British Medical Association on October 13, 1927.

only portions of the brain tissue shows softening and ultimate resolution into cavities, the holes being separated by bands of relatively sound tissue. That is that we get numerous adjacent minute focal lesions—"état crible." He believed that blockage of the lymphatics has a bearing on the tissue atrophy.

Hamilton in his text book on nervous diseases, published in 1878, discusses the condition. He states that it is common in general paralysis and that various writers have described "état crible" as peculiar spongy worm eaten appearance sometimes seen in old softenings. He quotes Arnt thus:

When the lymph spaces are dilated they become filled with the waste products of brain disintegration, leucine and amyloid bodies *et cetera*. The perivascular spaces are widely dilated and their openings appear very large where blood vessels are cut across. They result from edema of the perivascular spaces as a consequence of constant hyperæmia and he believes the condition very common in alcoholics.

Finally in "Handbuch der Pathologischen Anatomie des Nervensystems" are to be found similar descriptions of this state under such terms as "état crible" in old age, in softenings, in *lues* and in general paralysis. The term "état de fromage gruyère" is also used. However it is probable that the cavities in our specimen are much larger than those depicted in the textbooks and special microscopical preparations revealed the following particulars.

The cortex and white matter of the cerebrum and cerebellum revealed obvious signs of an encephalitis of some standing, presumably general paralysis. The examination of the cyst-like spaces showed that in most cases they were really dilatations of existing potential spaces. The adventitial sheaths of the blood vessels and sometimes the lumens of the vessels themselves in the pia-arachnoid of the cerebellum were filled with bacilli, somewhat resembling but about twice the size of a *Bacillus coli communis*.

There were a few mononuclear cells such as would be expected in *lues*, but no polymorphonuclear reaction such as might be expected should these organisms have had an *ante mortem* activity. We are led therefore to the conclusion that just prior to death a few of these organisms reached the intracranial cavity and there multiplied after death, converting the glucose in the cerebro-spinal fluid in the already abnormally dilated perivascular and arachnoid system of a general paralytic into carbon dioxide. Just how far the cavities are due to the germs and how far to conditions commonly found in general paralysis I am quite unable to say. In a few instances small microscopical masses of germs could be traced into the substance of the cerebrum or cerebellum, but these could be shown to be in the perivascular tissue of some blood vessel, itself a prolongation of the pia-arachnoid.

Mr. Schaeffer, of the Department of Anatomy, has occasionally noted a condition resembling this in brains he believed to have been insufficiently preserved before he had

access to them. Dr. Keith Inglis believes the condition did not spread to the vertex owing to the fact that this part of the brain would readily be reached by the 10% formalin in which the brain was placed some twelve hours after death.

It seems strange that the brain was the only organ showing this cavity like formation or indeed any special germ invasion, but it is also true that the dilated cerebro-spinal fluid reservoirs and perivascular systems of a typical general paralytic offer the most favourable conditions for quick culture growth with gas formation.

That the substance of the brain itself was not more torn up must be linked up with the fact that in gas gangrene of muscles the gas-forming activities of the special germs therein involved first commence and confine themselves to the fluids in the connective tissue spaces and lymphatics. This case is one which teaches us to be guarded in our diagnosis of a pathological lesion before avenues of approach other than mere naked eye observation have been tried.

SPONDYLOLISTHESIS.¹

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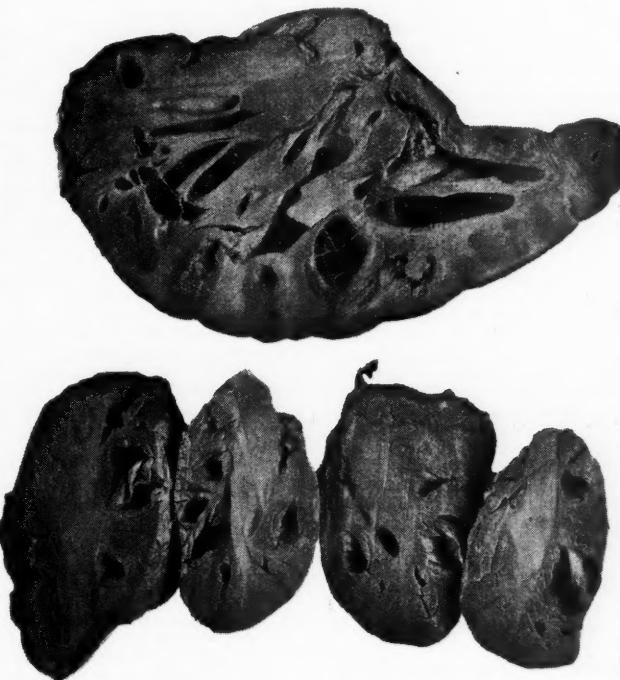


Figure showing sections of specimen described by Dr. Latham.

CASE I.—A man, aged thirty-six years, was first seen on June 1, 1927. He gave a history of low back pain and of pain down the back of the right thigh occurring more or less continuously for twelve years. During the last six months the pain had been severe and continuous. Much treatment had been given for sciatica by counter irritants, physical therapy and stretching of the nerve under anaesthesia. He had done labouring work, but could not recall any strain in lifting or any trauma. A lateral radiogram was taken in view of apparent decrease in obliquity of pelvis and this revealed a spondylolisthesis of moderate degree between the fifth lumbar vertebra and the sacrum. Possible causes of secondary sciatica were excluded and no reaction was obtained to the Wassermann test. The patient was put to bed and subjected to longitudinal traction for three weeks getting gradual relief from pain, until he was free at the end of four weeks. He was then suspended by the head and an accurately fitting plaster jacket was applied, the patient then being allowed to walk about. A fortnight later (July 11, 1927) the patient elected to have a bone graft inlay instead of the jacket and a massive graft was taken from the crest of the tibia 15 by 2.5 centimetres (six inches by one inch), and inserted between the split spines of the third, fourth and fifth lumbar vertebrae and the first and second sacral spines. Healing was uneventful. After a six weeks' recumbency in plaster he has been on his feet the last four weeks without recurrence of symptoms.

¹ The patients described herein were shown at a meeting of the New South Wales Branch of the British Medical Association on August 11, 1927.

The condition of spondylolisthesis, formerly rarely diagnosed, has now become more generally known as a cause of low back pain. This is due to the increasing use of lateral radiograms of this area and to the better radiograms obtained. The operation of compensation acts has rendered complete observation of this area more frequent.

The displacement varies in degree up to a 90° rotation on a transverse axis. Sex incidence is about equal. The essential point is the antero-posterior elongation of the body of the vertebra rather than the subluxation.

Langer has shown that in 10% of skeletons there is deficient union or absence of union between the vertebral laminae and the body of the vertebra. This solution in continuity across the neural arch at its junction with the body, often congenital, has been accepted as a very common factor in aetiology, with trauma as the final agency in the male and childbearing in the female.

There may be freedom from and absence of symptoms at the time of injury, extending to months or possibly years, making the compensation aspect a difficult one.

The radiogram, particularly the lateral and stereoscopic view, is the determining factor in the differential diagnosis between double congenital dislocation and lumbar Pott's disease and where the displacement is mild from local osteo-arthritis. The latter, however, may be present in addition as in the second case presented today.

CASE II.—A woman, aged thirty-seven years, was admitted on November 10, 1926. She gave a history of low back pain for three months which had been intermittent, but chiefly pronounced on lifting. She described the pain as excruciating. There had been a fall nine weeks previously, definitely increasing the pain which she localized in the region of the lumbo-sacral junction. She had seven children and always suffered from backache during pregnancy. When she stood up there was an increased lordosis and a depression could be felt above the sacrum in the middle line. A radiogram revealed early osteo-arthritis in addition to a moderate degree of spondylolisthesis.

The patient went through the special departments for the eradication of sepsis in teeth, tonsils, pelvis of kidney and cervix and was free of pain by the middle of December. A jacket was made in suspension on January 12 and this has since kept her comparatively free of pain.

But during the last month pain has returned nearly as severely as originally. She gets much relief by lying down. It seems difficult to estimate which of the lesions are responsible for most of the symptoms. Omission of the jacket increases pain. The balance of evidence favours the osteo-arthritis as being the principal factor and I have recommended that no interference be considered at present.

Reviews.

A MONOGRAPH ON REPRODUCTION.

"REPRODUCTION IN THE RABBIT," by John Hammond, is published as one of the biological monographs under the editorship of Mr. Crew and Mr. Cutler and maintains the high standard of previous monographs.¹

The questions considered may be briefly seen upon an outline of chapter headings.

The second chapter is diverted to reproduction in the male and some experiments were carried out upon the effect of vasectomy upon the formation of testicular hormone.

His results are not in full agreement with those of Steinach and of Ancel and Bouin.

He supports the idea of a generative ferment as postulated by Heape and thinks that there is not sufficient evidence that such an internal secretion is formed purely by the interstitial cells, nor are they formed purely by the seminiferous tubules. The growth of the animal before puberty, he believes, limits this supply of generative ferment available for the gonad and although the interstitial cells exist before puberty, lack of "generative

ferment" keeps both these interstitial cells and the seminiferous tubules inactive.

An interesting suggestion is put forward as follows:

Speaking generally, in the lowest forms of animal life where individual nutritive conditions (for reproduction) are at the highest level, both sexes coexist and function together in the same animal; but as the higher forms are approached and more bodily growth is achieved the nutritive conditions (for reproduction) of the individual are lowered and the surplus for reproduction diminishes, then the first male and female organs function alternately and eventually only one sex exists.

[It has recently been shown by Pearl and Boring (1918) and Crew (1923) that sex reversal may occur in quite high forms of animal life.]

In birds where the production of yolk calls for great nutritional expenditure only one ovary has survived, so that the highest degree of development in it can be attained.

Another question treated is the result of inbreeding upon sterility in the male.

The subjects treated in Chapter III are the various phases in female reproduction, the onset of the age of puberty, the breeding season. He remarks that the rabbit is an animal without a regular oestrous cycle and is primitive in other respects in its reproductive organs.

The mechanisms concerned in coitus are also discussed.

In Chapter IV Mr. F. H. A. Marshall, Hammond's teacher, discusses the formation of the *corpus luteum* and maintains his early views that the follicular epithelial cells are transformed into the luteal cells and that connective tissue which grows in with the blood vessels, is transformed into an interepithelial network. The progressive changes which the *corpus luteum* undergoes are described and figured and it is pointed out that the *corpus luteum* must not be confused with the atrophic blood follicles.

In the next chapter the questions concerning ovulation are discussed and it was found that a *corpus luteum* did prevent ovulation. The number of follicles which ripen in each ovary, was also examined and two types of follicular atrophy are described, the first type being that of the so called normal follicular atrophy, where simple absorption takes place and the second type that in which blood follicles are formed.

The effect of the age of the follicle on sex ratio was also briefly considered and while the results are based on very small numbers, it was tentatively noted that litters obtained as a result of mating shortly after parturition appear to contain a very high percentage of males, but no great disturbance of normal sex ratio is to be seen in matings made at later stages.

The changes preliminary to fertilization are discussed in a separate chapter as also the question of sterility in the female and the effects of lactation upon the reproductive organs and finally the duration of pregnancy.

It has also been found that the spermatozoa have a life of four days or under in the female tract and that the ovum is capable of being fertilized only for two to four hours after it leaves the follicle.

Again the effects of heavy lactation with a moderate diet upon the reproductive organs are practically those of functional castration, desire for coitus ceases, follicular degeneration occurs and the uterus becomes atrophic; these effects can be prevented by reducing the amount of milk formed or by heavy feeding on suitable foods.

It is suggested that the mammary glands utilize "generative ferment" in the formation of milk and so lower the supply for the ovary and for the formation of its internal secretions. While it is impossible even to summarize adequately the range of questions which have been investigated and also critically discussed, it must be especially emphasized that whatever may be the ultimate fate of the theory of a "generative ferment" as supported by Hammond, this work will always remain a classic by reason of the large number of actual experiments which are tabulated often in detail and by the ingenuity, variety and care exhibited in carrying out these experiments, so that the book contains an enormous mass of scientific data upon problems of reproduction in the rabbit.

¹ "Reproduction in the Rabbit," by John Hammond, M.A., (Cantab.), with Foreword and Chapter on the formation of the *corpus luteum*, by F. H. A. Marshall, F.R.S.; 1925. Edinburgh: Oliver and Boyd. Demy 8vo., pp. 210 with illustrations. Price: 15s. net.

The Medical Journal of Australia

SATURDAY, DECEMBER 3, 1927.

The Prevention of Venereal Diseases.

THE Victorian Branch of the Australian Association for Fighting Venereal Disease has recently addressed a memorandum to the Minister of Education, the Honourable J. Lemmon, on the sociological aspect of venereal diseases and the steps that should be taken to control these diseases. Reference is made in the memorandum to an investigation carried out in Detroit, a city of approximately a million inhabitants. It appears that the medical profession was requested to give information concerning the number of patients under treatment for venereal diseases on May 15, 1925. The response was splendid. Only eight medical practitioners of a total of 1,747 failed to comply with the request. From the returns it was estimated that the persons under treatment represented 1·35% of the entire population. The total amount of infection in a year is given at 6·75% of the population, although the actual number of persons infected would be somewhat less, since duplications and reinfections are not uncommon. Dr. C. H. Johnson, the Director of the Venereal Diseases Clinic in Melbourne, has examined the figures obtained by the statutory notification and has shown that, while the medical profession in Victoria (and presumably elsewhere) does not comply with the law, an approximate estimate of the amount of disease in the metropolitan area can be made. In the course of six years 291,901 infections were reported in the metropolis. This would be equivalent to 32·4% of the population or 48·6% of the population above sixteen years of age. Dr. Johnson has made a correction to cover one obvious error. It is known that gonorrhœa is between three and four times as common as syphilis. According to the notifications to each male infected with syphilis there were 2·8 infected with gonorrhœa, while to each female infected with syphilis there was 0·77 infected with gonorrhœa. He calls attention to the

fact that women often fail to take notice of a gonorrhœal infection and are in many instances quite unaware of it. Dr. Johnson's estimate must be regarded as a conservative one. It is further pointed out that the vast amount of venereal disease affects persons between the ages of seventeen and fifty. Unfortunately carnal knowledge is acquired by many long before the age of seventeen. The authors of the memorandum hazard a calculation on the basis that the average yearly number of infections notified in Victoria is 8,779 and that sexual life extends from sixteen to fifty, namely a period of thirty-six years, that the amount of venereal disease in the whole State would equal 307,265 infections.

It is one thing to know the approximate prevalence of a disease in a given community and quite a different matter to have accurate knowledge of the individuals infected. We are told that 70% of the medical practitioners in Victoria do not notify any infections. The object of anonymous notification is to enforce treatment. If medical practitioners do not notify infections, they will certainly not notify the Department when their patients fail to continue under treatment. Dr. Sydney Morris, acting Director-General of Public Health of New South Wales, has called attention to the fact that pharmacists and other unauthorized persons have been prosecuted for treating persons suffering from venereal diseases. This indicates that the Department of Public Health in New South Wales is struggling against heavy odds to gain a control over venereal infections. The prospects of reducing the amount of infection by insistence on thorough treatment during the acute stages of syphilis and during the whole course of gonorrhœa cannot be good unless the medical profession as a whole is determined to lend its aid to the health departments. Every medical practitioner has a duty to perform to his patient. He must apply all his knowledge and skill in a serious attempt to cure the disease from which he is suffering. He honours the trust placed in him by his patient and keeps secret all information gained in the course of his professional intercourse with his patient. But when the safety and welfare of the community are at stake, he is compelled by law to communicate

certain facts to the authorities. Some practitioners neglect to notify venereal infections, notwithstanding the fact that these notifications do not divulge the name of the patient, because the patient does not trust the anonymity. Moreover, the patient knows that if he fails to continue under treatment until all signs of active disease have disappeared, the practitioner is required by law to divulge his name. It is clear that unless the medical profession will realize the duty of collaborating with the health authorities in endeavouring to prevent disease, the plan of controlling venereal disease by means of anonymous notification and compulsory treatment by registered medical practitioners must fail. It is a serious responsibility for a practitioner to elect to break the law because his patient is afraid of the consequences.

In the absence of control through these measures of reducing the sources of infection, there remains one other means of gaining the mastery over venereal diseases. Experience has shown that warnings are of little avail. It is said that the age at which the greatest number of infections occur in women is nineteen years and in men between twenty-one and twenty-three. Infection is common at earlier ages. It is unlikely that educational methods will result in abstention in sexual intercourse by young people, save under relatively exceptional circumstances, for human nature is not easily suppressed and very early marriage does not occur in Australia. The proposal of the Australian Association for fighting Venereal Disease that instruction in elementary physiology to include the functions of reproduction, should form part of the training of every child, is quite sound and may be expected to contribute to some extent to the reduction of illicit sexual intercourse and venereal infections. There remains but one measure, that of active prophylaxis either before or immediately after exposure to infection. That properly conducted prophylactic measures can prevent gonorrhœa and at times syphilis has been proved both in civil life and during the war among the soldiers. Facilities should therefore be provided in every city for the application of adequate prophylactic measures against venereal diseases. At present these crippling

diseases are undermining the health and efficiency of close on one third of the entire urban population.

Current Comment.

DISSEMINATED SCLEROSIS.

THE diagnosis of disseminated sclerosis is not such a simple matter as might be supposed by those who study the text book accounts of the disease. The trinity of symptoms described by Charcot, nystagmus, scanning speech and intention tremor, is not always present and much difficulty is sometimes experienced in excluding cerebro-spinal syphilis. It occasionally happens that an accurate diagnosis cannot be made until the tissues of the central nervous system are submitted to *post mortem* examination and even when the condition clinically appears to satisfy all the requirements of a diagnosis of disseminated sclerosis, autopsy sometimes reveals that this condition is not present. It is therefore useful to study a series of cases in which the history is traced from the early stages to the *post mortem* room. Such a series has recently been supplied by Horace B. Conaway and Frederick C. Hill.¹ These observers have been working at the Philadelphia General Hospital. During the six years, 1921 to 1926 inclusive, 5,469 patients were admitted to the neurological wards and a diagnosis of disseminated sclerosis was made clinically in thirty-eight instances. During the same period 1,700 *post mortem* examinations of the central nervous system were made. The lesions of disseminated sclerosis were discovered in nine instances. The possibilities of error in diagnosis are demonstrated by the fact that in two of these nine instances a wrong diagnosis had been made. One case had been regarded as being an example of *dystonia musculorum deformans* and the other of postero-lateral sclerosis. In three other instances a diagnosis of disseminated sclerosis had been made, but at autopsy cerebro-spinal syphilis, arteriosclerosis and brain tumour were found. Included in their series are two cases in which the brain was sent from another hospital for examination, making the total eleven.

In considering disseminated sclerosis from the clinical and diagnostic side it must be remembered that the signs and symptoms will depend on what particular parts of the nervous system are involved. Several clinical types are sometimes described—the cerebral, cerebellar, bulbar and spinal. This classification is of course made purely for convenience of description and one type merges insensibly into another. The nature of the pathological change need not be discussed at present. Lengthy reference was made to that aspect in these columns in June, 1924. The variation in signs and symptoms is well shown in the series under review. Charcot's triad

¹ *The American Journal of the Medical Sciences*, October, 1927.

of symptoms was present in only four instances, six of the patients manifested nystagmus, six had intention tremor and six had slurring or scanning speech. The abdominal reflexes were absent and the patient complained of weakness of the lower extremities in every case but one. In seven instances disturbance of sensation was noticed; this was usually a diminution or loss of joint and muscle sense. Partial optic atrophy was present in six of the subjects and this was often limited to the temporal side of the disc. Perusal of the histories shows that remissions occurred in the early stages. This is in accordance with the experience of others and Conaway and Hill point out that when paraplegia with spasticity and contractures occurs, it is rare to see any retrogression of symptoms. Several of the patients under review were able to leave the hospital more than once and continue their former occupations only to come back within a few weeks or months complaining of the same symptoms as before. In two instances temporary improvement in vision occurred in the early stages of optic atrophy. Conaway and Hill do not discuss the reason for these temporary improvements. Remissions admit of a simple explanation, if the infective nature of the disease is accepted. No improvement could possibly occur once atrophy of the nervous tissues had taken place. In the early stages of an infective process, however, swelling would undoubtedly be present and it is quite conceivable that this oedema would vary from time to time, particularly as the process advances but slowly. If the pathological change is purely degenerative, it is difficult to understand how any temporary improvement could occur. It is unlikely that the psychological factor would influence a patient sufficiently to allow repeated discharge from hospital in the early stages of such a condition.

The investigation of any obscure nervous lesion will not be complete unless the cerebro-spinal fluid is submitted to laboratory examination. In fact no medical practitioner is justified in acting on a diagnosis of an obscure nervous condition when that diagnosis has been made on clinical grounds alone. Conaway and Hill failed to obtain a reaction to the Wassermann test in all their cases. In three instances they found a pleocytosis. They regard six as the maximum number of cells in normal cerebro-spinal fluid and refer to Ayer and Foster's statement that if the number of cells is in excess of forty, another diagnosis must be sought. The highest number of cells in their series was twenty. When the goldsol test was used, they found a "paretic" curve in two and a "luetic" curve in three instances. Unfortunately they do not discuss the significance of this manifestation. It opens up the whole question of the specificity of this precipitation test. The physico-chemical basis of the test is not thoroughly understood and the findings of Conaway and Hill serve but to emphasize the necessity for care in the interpretation of its results. The "luetic" or "paretic" curve of the goldsol test cannot be accepted as indubitable evidence of syphilis of the central nervous system unless it is accompanied by other evidence obtained in a laboratory. Of the

value of this test as an index of progress of the patient towards recovery there can be no doubt. This was exemplified in the patients suffering from general paralysis of the insane who were treated by malarial inoculation and who were shown at a recent meeting of the New South Wales Branch of the British Medical Association (*THE MEDICAL JOURNAL OF AUSTRALIA*, November 12, 1927, page 692).

Disseminated sclerosis is perhaps confused most often with cerebro-spinal syphilis. Conaway and Hill point out that in the latter condition the cells of the cerebro-spinal fluid may be increased more than in multiple sclerosis and that globulin is more commonly present. Another point of importance is the observation that the Argyll-Robertson pupil is practically never present in disseminated sclerosis. Another of their observations which is of practical utility, is the statement that when a diagnosis of syphilis is made in the absence of a response to the Wassermann test in the cerebro-spinal fluid, when the patient has received no treatment, the diagnosis is almost invariably erroneous. At the same time they do not wish to depreciate the value of clinical findings and it is by no means true that because the examination yields positive serological findings the neurological symptoms are necessarily due to syphilis.

It is also necessary to remember that the clinical picture in disseminated sclerosis may be partly obscured by emotional symptoms. Such a case is reported by Conaway and Hill. The patient was continuously emotional, talkative and overactive. As she became weaker, she became more emotional and her memory deteriorated. Diagnosis was not established until *post mortem* examination was made. Tumour of the brain may produce a picture which makes it necessary to consider disseminated sclerosis. This is most liable to happen if the tumour involves the cerebello-pontine angle. The classical symptoms of brain tumour are headache, vomiting and optic neuritis. Failing vision is seen in disseminated sclerosis. Both headache and vomiting may also occur; when they are present, they occur as a rule in the early stages. Nystagmus, one of the supposedly constant features of disseminated sclerosis, may occur in tumour of the brain. Ventriculography may possibly disclose the presence of a tumour if one be suspected, but this is an operation not to be undertaken lightly and it should certainly not be performed unless there are good grounds for supposing that a tumour is present. Yet another condition which must always be borne in mind, is hysteria. Here remissions are common and careful study of the areas of disturbed sensation will frequently reveal the real state of affairs. When the whole subject is considered, it must be recognized that owing to the scattered nature of the lesions there will always be some cases of disseminated sclerosis in which diagnosis *ante mortem* is impossible. Conaway and Hill have not contributed much that is new, but their communication is useful because they have laid stress on the proper evaluation of symptoms and on the judicious interpretation of laboratory findings.

Abstracts from Current Medical Literature.

SURGERY.

Acute Intestinal Obstruction.

W. D. GATCH, H. M. TRUSLER and K. D. AYERS (*The American Journal of the Medical Sciences*, May, 1927) report a series of experiments to determine the mechanism and significance of hypochloræmia and other blood chemical changes which occur in acute intestinal obstruction. The authors insist upon the recognition of the two types, those with simple obstruction without any involvement of the circulation of the bowel and those with acute strangulation in which there occurs interference with the arterial, venous and lymphatic circulation, as well as obstruction of the intestinal lumen. The latter type leads to gangrene of the bowel and is the most common. Dogs were used in the experiments and were anaesthetized by morphine and ether. To produce simple obstruction the bowel was divided at the desired level and the ends inverted. No control was attempted of preoperative feeding, but it was found that the preliminary dose of morphine induced vomiting which emptied the stomach of any grossly undigested food. The animals were kept in metabolism cages so that the total amount of vomitus and urine could be collected. Fifty-four animals were experimented upon and the results are set out in tables. A series of animals was subjected to double nephrectomy as well as intestinal obstruction and in these the chemical changes were the same as those with double nephrectomy alone. To determine the loss by vomiting one series of animals was made to vomit twice every day by the injection of apomorphine. The authors conclude that the normal water and salt balance is essential to the maintenance of the kidney function, as well as to the entire metabolism of the body. The administration of salt alone is of no value, if water is withheld. The parenteral administration of water alone is fatal. In acute simple obstruction of the small intestine, when the bowel remains intact, death is not due to toxæmia. The lethal factors are dehydration, reduction of blood chlorides by vomiting and starvation. Administration of sodium chloride and water by hypodermoclysis or any method which preserves the salt and water balance, will prolong life through the period of starvation. In acute strangulation of the bowel the factor of strangulation is added. Treatment with sodium chloride and water does not prevent death from toxæmia. The increase in the non-protein nitrogen of the blood appears to result chiefly from dehydration and consequent reduction of kidney function. Hypochloræmia is an important factor in this mechanism. It is also possible that hypochloræmia and dehydration cause increased tissue destruction which adds to the nitro-

genous increase. For these reasons the intravenous or subcutaneous administration of physiological sodium chloride solution will be a valuable procedure in the treatment of gastric tetany and intestinal obstruction. Since strangulation of the bowel occurs in most cases of obstruction, the limitations of the treatment are obvious.

Anterior Subluxation of the Atlas.

W. A. OPPEL (*The Lancet*, April 2, 1927) gives a full description of a case of anterior subluxation of the atlas in which cure was effected by excision of the anterior arch of the atlas. The operation through an incision along the posterior aspect of the left sternomastoid presented considerable difficulty.

Jaundice in Relation to Surgery.

E. R. FLINT (*The Lancet*, July 23, 1927) discussing jaundice in relation to surgery, points out that an excess of bile pigment in the blood to probably about ten times the normal amount is necessary before clinical jaundice appears. Until this limit is reached, there is a condition of latent jaundice (cholæmia) which probably has considerable clinical significance. He discusses the formation of bile pigment and adopts McNe's classification of the causes of jaundice as follows: Jaundice due to obstruction in the bile capillaries; that due to damage to the polygonal cells of the liver; that due to excessive blood destruction; that due to obstruction in the bile ducts. In addition to jaundice occasioned by damage and disordered function of the polygonal cells McNe's clinical classification of jaundice is given as follows: Obstructive hepatic jaundice; toxic and infective hepatic jaundice; haemolytic jaundice. Van den Bergh's test gives a definite method of distinction between complete obstruction of the bile ducts and haemolytic jaundice. In the former a direct reaction occurs, in the latter an indirect reaction. When jaundice is due to incomplete obstruction when it is one of the toxic or infective forms, no definite information is given by the test and a biphasic reaction occurs. This latter is the more common type of reaction and is probably due to a mixture of the first two types of jaundice. The test, further can demonstrate the condition of cholæmia without jaundice, such as occurs in cirrhosis and it will give valuable information about the degree of hepatitis accompanying gallstones. In discussing the clinical differentiation of obstructive and haemolytic jaundice it is stated that the pruritus is due to the presence of bile salts. Pruritus is present only in obstructive jaundice and then only in its early stages. With complete obstruction the secretion of bile salts ceases and the pruritus passes off. Van den Bergh's test gives no information about the nitrogenous and glycogenic functions of the liver. Two tests are quoted as being of some practical value in this respect, the phenoltetrachlorphthalein dye test

and the levulose test. Before either of these tests gives a positive result, there must be considerable changes in the liver. The Van den Bergh test is probably of greatest value to the surgeon. In latent jaundice a positive result to a test may be regarded as giving presumptive evidence of hepatic deficiency, not recognizable by ordinary clinical methods. The importance of this information lies in the warning it gives that certain preoperative measures are indicated; calcium should be given before operation to minimise the risk of bleeding (10% calcium chloride in five cubic centimetre doses by intravenous injection for three days before operation). If the bile content of the blood is increasing as shown by the Van den Bergh test, the risks of operation are increased and operation should be postponed, if possible. Decreasing values are a good prognostic sign. Glucose is of great value in hepatic deficiency and may be administered by rectum (5%), subcutaneously (3% in saline solution) or given in unlimited quantities by the mouth. Chloroform should never be used as an anaesthetic in these cases. Another factor of the greatest importance before and after operation is water. With regard to surgery in the various forms of jaundice; in haemolytic jaundice removal of the spleen gives results almost as good as in any other field of surgery. Painful jaundice is practically always, but painless jaundice is seldom due to stone; whilst stone in the common duct does not always give rise to jaundice. The surgical treatment of jaundice due to stone is removal of the stone and drainage of the common bile duct. As the gall-bladder is always diseased as well, it is a surgical maxim that with but few exceptions the gall bladder shall never be removed in the presence of deep jaundice, but should be drained and removed on a future occasion. "White bile," occasionally found in complete obstruction of the common duct, is an inaccurate term as this fluid contains neither bile salts nor pigment, being the secretion of the cells lining the ducts. This should be treated by the insertion of a tube into the common duct. Usually bile begins to flow quickly after this, but sometimes it fails to appear and the patient dies; in other cases after normal pigmented bile has flowed for a few days, it becomes less pigmented and the patient dies within a few days. Much can be done to prevent this kind of biliary failure by pre-operative treatment and warning of impending disaster is given by the Van den Bergh test. In carcinoma of the head of the pancreas an early cholecyst-gastrostomy or cholecyst-enterostomy should be done. The painful type of jaundice, associated with chronic pancreatitis, is usually due to stone which is the indication for treatment. Whilst it is usual to remove the gall bladder in the painless type, the rationale for this procedure is based on slender evidence

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and drainage of the gall bladder for the condition is not good surgery. It is more reasonable to suppose that the pancreas, liver and gall-bladder are all infected from a common focus. Jaundice, coming on after an operation, may be due to an overlooked stone, infection or injury to the ducts. The chief risks run by a jaundiced patient are haemorrhage, renal and hepatic insufficiency *et cetera*. With the knowledge obtained by clinical examination and the various tests the risks can be considerably reduced.

Chronic Duodenal Ileus.

D. P. D. WILKIE (*The American Journal of the Medical Sciences*, May, 1927) discusses his findings in seventy-five cases of duodenal obstruction. Imperfect rotation of the colon in foetal life and any factor, such as viscerotaxis, which allows an undue drag upon the mesentery, may be responsible for its causation. Hence it is more common in the asthenic type of patient. The most striking feature is the dilatation of the duodenum. The stomach is dilated and the pylorus widely patent. Of the seventy-five cases twenty-three occurred in males and fifty-two in females. In nineteen there was coincident ulceration of the stomach or duodenum and in four patients, all female, there was coincident cholecystitis with stones. The clinical picture is often ill-defined and difficult to differentiate. An important point is the relief obtained by posture during an attack and another is the failure of dietetic treatment to give relief. X ray examination is not always so valuable as would be expected, but in a typical case a saucer-like residue in the first and third portions of the duodenum would be present after four hours. Operative treatment consisted in duodenjejunostomy which was performed in sixty-four instances and appropriate surgical treatment was applied to any other lesion. In all cases, whether operation was resorted to or not, a surgical belt was used and the patients were subjected to a course of postural treatment. An analysis of the after history shows that unless definite mechanical obstruction exists, operative treatment is very uncertain in its results.

Diverticula and Duplication of the Duodenum.

J. W. LARIMORE and E. A. GRAHAM (*Surgery, Gynecology and Obstetrics*, September, 1927) discuss diverticula and duplication of the duodenum in reference to the importance of cholecystitis in the production of symptoms. Duodenal diverticula are clinically silent in the large majority and are only casual findings and others may present difficulties because of association with disease of the upper part of the abdomen. The association of ulcer with acquired diverticula is emphasized in many reports. Others including the authors show cholecystitis to be the source of symptoms. A pseudo-diverticulum is described as a necessary third type in addition to

the true and false types. Such pseudo-diverticula are redundant duplications of the duodenum within its retroperitoneal sheath and have a fixed topography. They operate as diverticula and are probably congenital in origin. Differentiation into true and false types cannot be made before operation or autopsy. Three cases in which operation was performed are reported; one was a large false diverticula and two were pseudo-diverticula. In the latter two cases the patients had pathological gall bladders, the removal of which relieved all symptoms, although the duplication or practical diverticular pockets of the duodenum remained. The authors lay emphasis on the necessity for consideration of the gall bladder in evaluating symptoms with which duodenal diverticula may be found associated. Cholecystography by the method of Graham has made adequate gall bladder diagnosis possible and is an essential procedure in the presence of diverticula.

Mixed Tumours of the Molar Glands.

LIONEL FIFIELD (*Lancet*, September 24, 1927) discusses mixed tumours of the molar glands. These glands are small glands, about five in number, which lie on the outer surface of the buccinator muscle; they are grouped round the site of the perforation of the muscle by Stenson's duct. Their ducts also pierce the muscle and open into the vestibule of the mouth. They are mainly mucous in character. After discussing the pathology of mixed tumours, the author states that these tumours generally occur in young adults, in whom they form slowly growing, firm, lobulated, freely movable swellings. They may grow slowly for years, but at any time may take on rapid growth and infiltrate surrounding structures. The notes of two cases are given.

The Urachus and Umbilical Fistulae.

R. CAMPBELL BEGG (*Surgery, Gynecology and Obstetrics*, August, 1927) discusses the urachus and umbilical fistulae. At birth the urachus reaches the umbilicus and is attached at the apex by three fibrous strands, one to each umbilical artery and one passing into the umbilical cord. The last is the only remnant of the allantois. Immediately following birth the bladder commences its descent, taking the urachus with it. The fibrous tissue of the umbilicus is pulled into a long strand of cord-like tissue. The urachus may remain patent, with the result that urine leaks into the transversalis-peritoneal space, giving rise perhaps to septic urachal cysts. The normal narrowing and obliteration of the urachus entering into the bladder may not occur and a true functional bladder reaches the umbilicus. In such cases the bladder does not descend, but remains permanently in this position. This is the condition present in all congenital cases of umbilical urinary fistulae which are really vesico-umbilical fistulae. Extroversion of the bladder presents a typical picture of non-descent of the

bladder and non-formation of the urachus. A study of recorded cases of acquired urinary fistula at the umbilicus reveals that they are never due to a patent or persisting urachus, but to the escape of urine through the umbilicus after it has extravasated from the bladder into the perivesical space. All manner of discharges have come from the umbilicus as well as urine. In regard to causation, there is an obstruction hypothesis and according to this some cases are explained by total or partial obstruction of the lower urinary tract and there is a developmental hypothesis which is more probably correct. The urachus is entirely developed from the ventral cloaca and not from the allantois. The bladder is sometimes formed from the whole of the ventral cloaca and there is no urachus at all. The urachus may be very imperfect, leaving a wide channel between the bladder and the umbilicus. If the formation and descent of the urachus and bladder follow normal lines, it can never at any future time act as a conduit to convey urine from the bladder to the umbilicus. Treatment is directed to relieving possible obstruction and the fistulous tract may be tied off or the upper part of the bladder may be dissected away and the bladder opening closed by a plastic operation.

Cholecysto-gastrostomy for Gastric Ulcer.

N. N. NAZAROV (*Surgery, Gynecology and Obstetrics*, October, 1927) gives the conclusions arrived at by the Congress of Russian Surgeons at Moscow, 1926, on the question of the effect of cholecysto-gastrostomy on gastric ulcer. This is an operation excellent in theory, but one which has not been tested extensively enough either clinically or experimentally. Professor Bogoraz was the first in Russia to advocate this operation as a means of controlling one of the principal conditions for the development of gastric ulcer, namely hyperacidity of the gastric contents. His idea, to attain prolonged neutralization of acid contents by a continuous flow of bile into the stomach, was justified by the excellent postoperative results achieved by him in his twenty-five cases. Cholecysto-gastrostomy is technically a more simple operation than gastro-enterostomy. It does not involve any of the serious complications resulting from gastro-enterostomy in certain cases. It is more physiologically correct and more logical. This operation is new but may be regarded later on as the most suitable operation in certain cases of gastric ulcer. It should not be undertaken in the presence of large indurated ulcers, if there is a possibility of cancerous degeneration. It is more indicated in the soft ulcer for which previously gastro-enterostomy has been done. The anastomosis has to be of sufficient length, not less than two or three centimetres, otherwise constriction will occur, acidity redevelope and the symptoms return.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE SOUTH AUSTRALIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the Adelaide Hospital, on August 25, 1927. The meeting took the form of a series of clinical demonstrations.

Cretinism.

DR. K. S. HETZEL showed a child, aged sixteen months, a female cretin whose weight was 6·3 kilograms (fourteen pounds one ounce). The child was the result of a second pregnancy and had been born one month postmaturely. At birth she had weighed 5·3 kilograms (eleven and three quarter pounds). The mother's first pregnancy had resulted in the birth of a still born infant which was also said to be one month postmature. The patient had had slight convulsions after birth. Breast feeding had been adopted for four months. This had been followed by the use of "Lactogen" and finally of lactic acid milk. At the time of demonstration the child was receiving vegetables, fruit juice, biscuits, bread and butter and milk. The child's appearance was that of a typical cretin. The skin was dry, yellowish and like tissue paper in appearance. The face was bloated and there was a wide gap between the eyes. The mouth was continually held open and the tongue protruded. There were no teeth, hair was sparse and the anterol fontanelle was widely patent. X ray examination of the wrist joint revealed no evidence of rickets, but revealed delayed bony development.

Dr. Hetzel said that cretinism should be suspected in infants which weighed four kilograms (nine pounds) or over at birth. It was important to realize that unless the condition were recognized in the early months and certainly before six months of age normal development could not be expected, even with continuous thyroide medication. Examinations had been carried out in London of a considerable number ofcretins, aged up to eighteen years, who had been under continuous thyroide treatment. Not one had been normal or approximately normal in mental development. The patient at the time of observation had been on thyroide treatment for six days only. It was hoped to show the child again at a later date when the effects of thyroide therapy might be demonstrated.

Erythroedema.

DR. HETZEL also showed a female child, aged seventeen months, who weighed 11·4 kilograms (twenty-five and a half pounds). Advice had been sought on account of an itchy rash covering most of the body and red scaly hands and feet which appeared to be painful. Slight signs had been present for four or five weeks, but during the previous two weeks the symptoms had become more pronounced. Anorexia and sweating at night were present. The child was very miserable and cried a great deal, but photophobia did not appear to be present, although the child slept with its face buried in the pillow. The mouth was normal. The child had walked prior to the onset of the disease, but at the time of demonstration could not support itself very well and made no attempt to walk. There had been some loss of weight. No post-nasal discharge had been demonstrated. The condition was that of an early erythroedema and the typical appearance of the hands and feet and of the rash on the body was much more pronounced during the day time. An interesting feature was that a baby brother immediately older had died at the age of eleven months of erythroedema.

Hemiparesis.

DR. A. R. SOUTHWOOD showed a man, aged fifty-eight years, who was suffering from right hemiparesis. He also had amblyopia in the right upper quadrant of the visual field and partial deafness in the left ear. The symptoms were of six weeks' duration. The provisional diagnosis was that a small tumour was present involving the left cerebral hemisphere in the region of the optic thalamus and the internal capsule. Apparently some at

least of the symptoms were of vascular origin, for improvement in the vision and in the motor power had been noticed during the previous week.

Chronic Bronchitis.

DR. SOUTHWOOD's second patient was a man who had suffered for eight years from chronic bronchitis. The man had been on active service during the war and gas irritation was a probable causative factor. Dr. Southwood had injected "Lipiodol" through the crico-thyroid membrane and the skiagram manifested a normal outline of the bronchial tree. There was no evidence of bronchiectasis. The "Lipiodol" had apparently been of therapeutic value.

Achalasia Cardiae.

DR. SOUTHWOOD demonstrated the skiagram in a case of achalasia cardiae, the so-called cardiospasm. The patient was a woman, aged fifty years, and the condition had persisted for fifteen years. During the previous three years it had become worse. Dilatation by bougies had been carried out and feeding by stomach tube. It was proposed to undertake manual dilatation after the manner of Walton.

Post-operative Hernia.

DR. J. CORBIN showed a patient on whom he had operated for a post-operative hernia in the epigastric region. He had used silver wire threaded round the recti to approximate these muscles and had tied the ends together over a gauze pack. He had removed the wire in a fortnight and the result was excellent.

Torsion of the Omentum.

DR. CORBIN also showed a specimen consisting of omentum which had been removed from a patient. The omentum was twisted and the condition of the patient had resembled that of a person suffering from acute appendicitis.

Sarcoma of the Leg.

DR. C. T. CH. DE CRESPIGNY showed a man who was suffering from sarcoma of the leg. This tumour had originated at the site of a large haematoma, caused eighteen months previously by the patient being dragged by the leg around which a moving chain had become entangled. The patient had secondary deposits in the lungs and blood stained effusion in both pleural cavities. Dr. de Crespigny drew attention to the rarity of the history of a sarcoma arising from a haematoma.

Tetany.

DR. DE CRESPIGNY also showed a young woman who was suffering from tetany characterized by pronounced flexor spasm of the hands and feet.

Pernicious Anaemia.

DR. D'ARCY COWAN showed a man who was suffering from pernicious anaemia. The case was of interest on account of the difficulty in diagnosis. The patient was thirty-seven years of age and his chief complaint was pain across the upper part of the back. The pain had been present intermittently for three years and had gradually become worse. He also complained of lassitude, shortness of breath, palpitation and occasional nausea and vomiting. His previous health had been good and he had had no serious illness. He had been sent to Dr. Cowan with a provisional diagnosis of hydatid of the liver. Examination had revealed a pale man in a moderately good state of nutrition. Beyond this the only obvious abnormality had been a slight enlargement of the liver, the edge being palpable below the costal margin. No neurological signs had been present. The Casoni test had been carried out and a definite reaction obtained. No reaction, however, had been obtained to the complement fixation test. An X ray examination had failed to reveal any abnormal bulging of the liver or any pathological change in the dorsal region of the spine. On these grounds active hydatid disease had been excluded. The results of the first examination of the blood had suggested a severe degree of secondary anaemia with a low colour index. A fractional test meal had revealed complete achlorhydria.

An opaque meal had been given and the radiologist in his report had stated that there was a filling defect at the pyloric end of the stomach, suggestive of carcinoma. Subsequent blood examination, however, had revealed a blood picture typical of pernicious anaemia. The erythrocytes had numbered just over 2,000,000 per cubic millimetre and the cells had manifested characteristic changes including megalocytosis. The pains in the back had later been replaced by pronounced paraesthesia and this was probably due to early cord impingement.

Addison's Disease.

DR. COWAN also showed a woman, aged fifty years, who was suffering from Addison's disease. Her illness had started four years previously with what was described as an attack of influenza. She had not been well ever since and had complained of cough and weakness. For twelve months the symptoms had been more pronounced and there had been a definite change in her colour; her friends had frequently commented on the alteration. Her previous health had been good. Dr. Cowan pointed out that there was considerable pigmentation of the face and hands which were of a deep brownish colour. The pigmentation was confined to the exposed parts and was not to be found in the buccal mucosa. Pronounced muscular weakness was present and there was loss of cardiovascular tone. The systolic blood pressure was ninety millimetres of mercury and the diastolic sixty millimetres. He also said that there were present the clinical signs suggesting tuberculosis of the apex of the right lung and X ray examination had confirmed this. Tenderness was present in both renal regions. No tubercle bacilli had been found in the sputum, but there had been a pronounced febrile reaction following the injections of five milligrammes of old tuberculin and this had been accompanied by an increased cough and by pain in both loins. Sergeant's white line had not been demonstrated and the Goetsch test had not been done. The combination of pigmentation, myasthenia and low blood pressure was typical of Addison's disease. Dr. Cowan thought it probable that the patient was suffering from chronic pulmonary tuberculosis with involvement of the suprarenals by the tuberculous process. The patient was being treated with small doses of tuberculin and in addition to rest and the ordinary hygienic dietetic measures she was receiving suprarenal extract. Considerable improvement had taken place, but it had to be seen whether this would be permanent.

Pulmonary Tuberculosis.

In the third instance Dr. Cowan showed a number of skiagrams taken from a patient who was too ill for demonstration. The patient was a woman of about forty years of age, who was suffering from pulmonary tuberculosis. The first skiagram showed evidence of extensive infiltration of the right lung and indications of commencing pathological change in the left lung. As the patient had manifested no signs of improvement after a month's rest in bed, it had been decided to induce an artificial pneumothorax on the right side. Following the introduction of three hundred cubic centimetres of air the patient had become acutely ill with high temperature, rapid pulse and cyanosis. There had been an extensive subcutaneous emphysema over the whole of the right side of the chest and this had masked the clinical signs. A week later the second skiagram had been taken. It showed a complete collapse of the right lung with the heart and mediastinum pushed over to the left side. Evidently a spontaneous pneumothorax had occurred and instead of partial collapse of the lung a sudden and complete collapse had taken place. The effect on the patient had been unfortunate, as the disease on the other side had rapidly progressed. Dr. Cowan said that he had seen this occur on one previous occasion and that sudden death had resulted. It was a complication to be borne in mind and he laid emphasis on the necessity for determining the proper functioning of the second lung before a partial collapse of the first was produced.

Separation of Epiphysis of Humerus.

DR. I. B. JOSE showed a girl, aged thirteen years, who had suffered from a separation of the upper epiphysis of

the left humerus. This patient illustrated one of the more uncommon fractures which often required open operative treatment for successful reduction. It was necessary to attain absolutely accurate apposition of the fragments in order to insure not only perfect movement at the shoulder joint, but also that there might be no interference with the growth of the humerus, which largely took place at the upper end of this bone. A skiagram revealed forward displacement of the lower fragment and external rotation of the upper. Dr. Jose stated that he had attempted to reduce the displacement under anaesthesia, but had been unsuccessful owing to inability to control the upper fragment so had gone on to expose the fracture by a small incision along the anterior border of the deltoid and had easily levered the fragments into place. No internal fixation was necessary, in fact screws or wire would be detrimental to the epiphyseal line. The dome shape of the latter had been sufficient to keep the fragments in place as long as the arm was abducted. This had been maintained by a light abduction frame splint for a week, when the arm had been brought to the side and held in a sling and movements had been commenced. At the time of demonstration three weeks had elapsed since the reduction and the girl had full use of her arm and perfect active movement at the shoulder and a skiagram revealed absolute anatomical apposition of the fragments.

Ramisection for Constipation.

DR. JOSE also showed a woman, aged thirty years, on whom he had performed ramisection of the sympathetic nerves to the hypogastric plexus after the method of Royle for chronic constipation and attacks of abdominal distension where any mechanical obstruction had been definitely excluded. The result had been absolutely satisfactory up to the time of showing the patient, but the interval, five weeks only, since the operation had been done was too short to draw any definite conclusions. He hoped to report further on the case at a later date.

Congenital Pulmonary Stenosis.

DR. E. F. GARTRELL showed a boy, aged seven years, suffering from congenital heart disease. The lesion had not been suspected until the age of three when he was undergoing a routine examination. Subsequently the parents had noticed that he was disinclined to run about and that any exercise would bring about breathlessness and blueness of the lips. When he was at rest the blueness had been slight and the breathing normal. Examination after brisk walking for one hundred yards revealed moderate dyspnoea and cyanosis.

The finger tips were good examples of clubbing due to venous stasis. The apex beat was in the mid-sternal line and X ray examination revealed enlargement both to the right and left. In and near the pulmonary area a loud, harsh, systolic murmur was heard, this being accompanied by a thrill. The pulmonary second sound was faint. The electrocardiogram showed definite right ventricular preponderance. In the blood the haemoglobin value was found to be 100% and the number of red cells was 6,830,000 per cubic millimetre. It was pointed out that in some cases the stenosis was the result of fetal endocarditis, but in the majority it originated in maldevelopment of the branchial arches and cardiac tube between the fourth and eighth weeks of intrauterine life.

This was the reason why 80% of the cases were complicated by other lesions such as patent interventricular septum and patent foramen ovale. The stenosis occurred in one of three places: (i) Between the bifurcation of the artery and the valve; (ii) in the cusps of the valve; (iii) in the infundibulum.

Owing to the blueness Senac in 1749 had named the syndrome *morbus caruleus*. The origin of the cyanosis was multiple. Firstly, it was due to venous stasis, for the venous radicles, like the precapillary loops, were dilated. Secondly came the mixture of arterial and venous blood. Lastly, the polycythaemia brought about an increased amount of carboxyhaemoglobin in the blood.

The prognosis in such cases was bad, 10% of patients dying in their first year. Only about 36% reached the age

of puberty while it was only rarely that any attained middle age. In some cases a fatal issue resulted from acute endocarditis superimposed on the malformed valve. Many, however, died from pulmonary tuberculosis. Treatment consisted mainly of general measures, avoidance of exertion and infections. Fainting fits due to cerebral ischaemia could often be overcome by vasodilatation.

A MEETING OF THE VICTORIAN BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at The Eye and Ear Hospital, Melbourne, on October 20, 1927. The meeting took the form of a series of clinical demonstrations by members of the honorary staff.

Double Papillœdema.

DR. J. F. RUDALL showed a male patient, aged twenty-six years, who had been complaining for the previous week of headache which he had attributed to his eyes. He had had a chance eight years previously. On examination the vision had been $\frac{1}{2}$ in each eye. Retinoscopy had revealed three diopters of myopia in both eyes. There had been double papillœdema which could be clearly seen with a +6 lens in the ophthalmoscope. The blood had reacted strongly to the Wassermann test. Dr. Rudall said that the interesting feature was the presence of a double papillœdema with normal vision.

Detachment of the Retina.

DR. RUDALL also showed a patient who had had an injury to the eye fifteen years previously. There had evidently been a large haemorrhage into the vitreous which was fluid and contained numerous floating opacities. There were also areas of dense black pigmentation in the upper part of the retina, presumably the result of haemorrhage, while the lower part of the retina was detached and had remained clear.

Chorioiditis.

DR. RUDALL'S next patient was a female, aged thirty years, who had been admitted to hospital only six hours before the time of the meeting and whose condition had therefore not been fully investigated. Retinoscopy had revealed three diopters of myopia. About three millimetres to the nasal side of the optic disc and about twice its size was an isolated patch of chorioiditis in its earliest stage. The surface of the patch had a cotton wool appearance and the edges were blurred. Dr. Rudall thought that the most likely cause of the chorioiditis was a septic condition of the teeth and gums.

Trachoma.

DR. RUDALL also showed two patients with trachoma. He described their condition as of special interest by reason of the recent discovery by Noguchi of an organism which he believed to be the cause of the disease; a minute Gram-negative pleomorphic bacilliform organism, motile only under certain conditions which grew on a semisolid medium containing fresh animal serum and haemoglobin, but not on any of the ordinary culture media and only occasionally on blood agar. This organism had been grown in culture from the American Indians suffering from trachoma, the disease had been reproduced in monkeys from whom the organism had been recovered by culture. There seemed to be little doubt that a discovery had at last been made of the organism which was responsible for so much blindness in all parts of the world. Dr. Rudall thought that as the organism had now been discovered, new methods of treatment should soon be available for combating the disease.

Corneal and Scleral Wound.

DR. J. A. O'BRIEN showed a patient, aged five years, who had been admitted to hospital with an extensive corneal and scleral wound of the left eye, due to a blow with a piece of tin. Immediate suturing with silk had been undertaken and there had been complete recovery with a flat scar. Vision, as far as could be determined, was quite good.

Interstitial Keratitis Following Injury.

DR. O'BRIEN'S next patient was a male, aged twenty-eight years, who had received an injury to the left eye from a meat hook. Typical interstitial keratitis had developed and had been followed by a flocculent deposit in the anterior chamber. The blood had reacted strongly to the Wassermann test. Complete and rapid absorption had followed after energetic antisiphilitic treatment and the local application of X rays.

Proptosis of the Left Eye.

DR. O'BRIEN also showed a patient, aged twenty years. On admission the temperature had been 38° C. (102° F.) and the pulse rate 100 in the minute. There had been pain and tenderness at the lower lateral angle of the left orbit and proptosis of the left eye. The vision in the left eye had been $\frac{1}{2}$, but there had been no intraocular signs. The left maxillary antrum had been washed out by Dr. Lynch and muco-pus obtained. Two days later the proptosis had disappeared and the vision in the left eye had returned to $\frac{1}{2}$.

Other Eye Conditions.

DR. MARK GARDNER showed a number of interesting eye cases, included amongst which were the following: Extensive central splitting of the cornea with traumatic cataract and hyphema from an accidental injury to the eye with another boy's finger; sarcoma of the ciliary body; disseminated chorioiditis; *keratitis disciformans*; traumatic cataract; dendritic ulcer of the cornea.

DR. M. E. LYNCH showed patients illustrating the features of syphilis and tuberculosis of the palate.

MEDICO-POLITICAL.

THE attention of the Council of the Victorian Branch has been drawn to restrictive covenants in certain agreements between junior resident medical officers and the hospital committees in country towns. According to these agreements the medical officer binds himself not to practise within the district for a period of years after the termination of the agreement. The Council has informed many of the hospital committees that it is opposed to the restrictive clause and has asked the committees not to include them in any future agreements. Graduates are advised not to accept appointments when the agreement or contract that has to be signed, contains a restrictive covenant.

NOMINATIONS AND ELECTIONS.

The undermentioned have been elected members of the Victorian Branch of the British Medical Association:

Moreton, Arthur Roberts, M.B., B.S., 1926 (Univ. Melbourne), 6, Ryrie Street, Geelong.

Duffy, Charles Allan Gavan, M.B., B.S., 1926 (Univ. Melbourne), South Yarra.

Rawlings, William Joseph, M.B., B.S., 1927 (Univ. Melbourne), East Brunswick.

The undermentioned have been elected members of the New South Wales Branch of the British Medical Association.

Callow, Francis Henry McClements, M.B., Ch.M., 1926 (Univ. Sydney), Chertsey Street, Merrylands.

Machin, William Frederick, M.B., 1925 (Univ. Sydney), c/o Dr. Harker, Lambton.

Sippe, Clive Henry, M.B., Ch.M., 1926 (Univ. Sydney), Nelson Road, Lindfield.

Obituary.

CHARLES WILLIAM REID.

In our issue of November 12, 1927, we announced the death of Charles William Reid, of Watson's Bay, Sydney, as the result of the collision between the American mail steamer *Tahiti* and the Sydney ferryboat *Greycliff*. It appears that Dr. Reid was travelling in the smoking cabin at the time of the accident. The chances of escape were remote and he, together with nearly everyone in the cabin, was drowned.

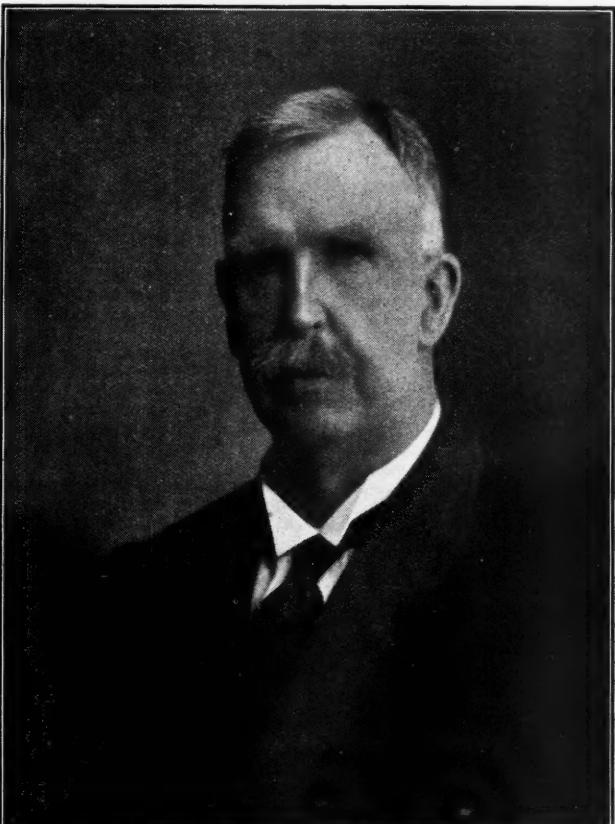
Charles William Reid was born at Orange, New South Wales, on February 9, 1870. He spent his early childhood in the country, but was sent to the city when the time came for school attendance. He was a pupil at the

Sydney Grammar School and made his mark in the class room as well as on the playing fields. In 1889 he entered the University of Sydney with the object of studying medicine. He was a keen and capable cricketer and within his year played for the University first eleven. In 1890 he left Sydney and travelled to the other side of the world. He then entered the Edinburgh University. His career at Edinburgh was a successful one, both in regard to his studies and in sport. As a consequence he was highly popular among his contemporaries and was respected and liked by his teachers. He played in more than one cricket match with the Gentlemen of Scotland and he captained the Australasian eleven that was formed at this stage from among the Australian and New Zealand men studying in Edinburgh. In 1896 he took the degrees of bachelor of medicine and master of surgery.

After graduation he returned to New South Wales, where he obtained an appointment in the lunacy service. He was first Assistant Medical Officer at Calton Park Hospital for the Insane; later he was transferred to Parramatta and still later to Kenmore. During the six years of his service under the late Frederic Norton Manning and Eric Sinclair he achieved a great deal by his wide knowledge of medicine, his ability to acquire expert knowledge in psychiatry in the mental hospitals and his power to deal with men. In 1903 he gave up his position at the mental hospital at Kenmore and obtained the appointment of Port Health Officer in Sydney. Although federation of the colonies had been accomplished in 1901, the Commonwealth authorities had not then acquired the essential legislative powers to control the quarantine arrangements. The port health officers were under the State Department of Public Health. About the time of his appointment variola appeared in Queensland and Tasmania and the defect of the divided control was evident. Charles William Reid had a difficult task from the first, but he met his difficulties with skill. He proved himself to have resource and

initiative and he gained an ever increasing popularity on account of his diplomatic behaviour and of the firmness that he displayed when action was demanded. In 1908 the *Quarantine Act* became law and from that time until the date of his death he carried out the duties of Chief Quarantine Officer for New South Wales in the most exemplary manner. The responsibilities of his office were by no means lessened under the Commonwealth Department since the control has been rendered uniform in all the States. The medical profession is as a rule unaware of the large amount of active work which is carried on in the planned endeavour to exclude exotic and other communicable diseases from the Commonwealth. From time to time this sentinel work is brought to the notice of the public. Charles William Reid proved that he could be relied upon to exercise vigilance unremittingly and to take every possible precaution when disease knocked at the door.

For several years Dr. Reid resided at Watson's Bay on the southern borders of Sydney Harbour and he did a certain amount of private practice in the neighbourhood. He was well known and very popular among his colleagues and had a large circle of friends in the profession who held him in the highest esteem. His giant figure—he was six feet eight and a half inches in height—was not infrequently seen at meetings of the New South Wales Branch of the British Medical Association, more particularly when matters affecting public health and in the prevention of epidemic disease were being discussed. In his younger days he was a keen oarsman and later in life he replaced cricket by tennis and sculling by sailing. As a practitioner and as a husband he was the gentlest of men. He married a lady in Orange in the year 1901 and is survived by his widow, two sons and one daughter, who have received evidence of genuine sympathy from a very large section of the medical profession.



EDWARD HAROLD BINNEY.

We regret to announce the death of Dr. Edward Harold Binney, which occurred at Sydney on November 19, 1927.

Public Health.

PROSECUTIONS UNDER THE "VENEREAL DISEASES ACT."

The Department of Public Health of New South Wales is conducting an energetic campaign to suppress the illicit sale of drugs prohibited under the *Venereal Diseases Act* and to prevent the treatment of venereal disease by persons other than qualified medical practitioners.

One glaring case is that of Edward M. Rasmussen, herbalist, of 471, George Street, Sydney, who has been convicted and fined several times for serious offences of this kind. But in addition, the following well-known chemists have all been fined recently for selling drugs the sale of which is prohibited under the *Venereal Diseases Act*:

Hallams Limited, Hunter Street, Sydney.
C. P. Fincham, Elizabeth Street, Sydney.
A. E. Sharpe, Hunter Street, Sydney.
P. W. Purdie, Park Street, Sydney.

Hermann Sabel, Hunter Street, Sydney.

The Commissioner under the *Venereal Diseases Act* states that the Department is determined to prevent, as far as possible, the continued treatment of venereal disease by unqualified persons and the sale of prohibited drugs. It is hoped, therefore, that the publication of the results of these prosecutions will serve as a warning to others.

Correspondence.

LIVER FEEDING IN PERNICIOUS ANÆMIA.

SIR: Professor Elliott's article on "Liver Feeding in Pernicious Anæmia" should be read and reread by anyone having a case of pernicious anæmia under his care. Harvard Medical School in Boston, United States of America, has a "Committee on Pernicious Anæmia" which has been investigating the subject for a long time. I wrote to them in July of this year asking if an extract of liver was available. Dr. E. A. Locke, a member of the Committee, wrote and said that the Eli Lilly Company, of Indianapolis, were preparing an extract for them. The Committee was confident that a satisfactory product would be on the market "in the near future." It is not an easy matter for an anæmic patient with a weakened digestion to eat 120 to 240 grammes of calf or beef liver every day. The sponsors of this method of treatment offer several methods of preparing the liver. One is to parboil it for twenty to thirty minutes without salt and then broil (not fry) on both sides. Salt is only added after the cooking is over, otherwise the liver becomes tough and leathery. Kidney 120 to 240 grammes may be substituted occasionally and cooked in the same way. A lady of over sixty was well nigh moribund with pernicious anæmia. A transfusion of ten ounces of her son's blood tided her over the worst, but did not seem to help her anæmia. I induced her to eat liver. The result was dramatic. In a month the lemon tint of the skin had been replaced by a pink flush and she looked and felt well. She returned to Sydney apparently in perfect health. She still eats liver daily, although she has a great aversion to it and looks forward to the arrival of the liver extract from America.

Yours, etc.,
Narromine, New South Wales.

J. W. SUTHERLAND.

November 14, 1927.

STANDARDS FOR INFANTS' FOODS.

SIR: I am delighted to read that in the opinion of Dr. A. Jefferis Turner we have in Brisbane an excellent milk supply.

Is it not a reasonable supposition that all dairyman who supply milk, do so in an uncontaminated condition as is possible, not merely to comply with milk regulations, but to insure the keeping qualities of the product and so retain the goodwill of their customers? No doubt in many cases preservatives have been used, but that factor at the moment is not under review.

The slogan of years has been: "Give us a pure milk supply and we will save the babies." What evidence exists today of the soundness of this claim?

The value of milk as a food is well established and *prima facie* we can say that milk in the process of souring is a better food than that in its chilled or pasteurized form. We can also conclude that milk, contaminated by flies or other means from existing cases of dysentery, is a positive menace and the cause of epidemics. This we may assume occurs rarely in the dairy, but commonly in the home. The prevention of the summer dysentery of infants thus resolves itself into a problem of domestic hygiene as in most infectious diseases and it is time we shifted the responsibility for infant mortality from the milk-vendor to the consumer. Any improvement noticeable in late years is due to better education of the mothers in the value of breast-feeding and the stimulation of the natural ability of all mothers in this direction without the fiction of galactagogues or the glamour of mummified foreign proteids and a wholesome fear of fly-blown ferment. But in this sphere much remains yet to be done, while standardization can wait.

Yours, etc.,

A. C. F. HALFORD,
M.D., B.S. (Melb.), M.D. (Oxon).

Brisbane,

October 30, 1927.

HEBEPHRENIA.

SIR: Kraepelin writes: "The great predisposition of youth led Hecker to the name hebephrenia, insanity of youth." While the prefix hebe is a Greek derivative indicating youth, we are more familiar in medicine with the Latin-derived hebe seen in hebetude from *hebetare* to dull, stupefy (Webster). Unless there is a closer connexion than I can see between the Latin and Greek words, then Hecker seems to have coined a word of doubtful value. Perhaps

you or some correspondent will throw some light on the matter.

Yours, etc.,

K. ST. V. WELCH.

235, Macquarie Street, Sydney.
November 23, 1927.

[We cannot agree with Dr. St. Vincent Welch that hebephrenia is derived from the Latin *hebetare*. Murray in the *New English Dictionary* and other lexicographers give the derivation $\eta\beta\eta$ = youth, $\phi\phi\eta$ = mind. The derivation of hebetude is different. Editor.]

Post-Graduate Work.

CORRIGENDUM.

OUR attention has been drawn to a mistake in the syllabus of the November post-graduate course in Melbourne. On Thursday, November 10, between 2.30 and 5 o'clock, Mr. H. C. Trumble, Mr. C. J. O. Brown and Dr. J. F. Chambers dealt with the errors in diagnosis and the end results in disease at the Austin Hospital. In our issue of November 12, 1927, on page 697, the third name was erroneously given as Dr. R. W. Chambers.

Library Notes.

TWO sets of *Hermes* are now in the possession of the Fisher Library of the University of Sydney, gaps in them having been filled mainly owing to the kindness of Dr. C. G. McDonald and Dr. F. Guy Griffiths. One of these sets is complete from the beginning, but the other lacks Volume XIV, No. 3 (July 22, 1908).

The Library also lacks: *Hermes* (Medical Supplement), Volume II, No. 3 (November 30, 1897), and Volume III, No. 3 (December 27, 1899), and *The Journal of the University Medical Society*, Volume VII, Nos. 4 and 5 (1903-1905), Volume VIII, Nos. 1-5, and any after No. 6 (1906-1907), and Volume IX, Nos. 1-6, and any after No. 7 (1907).

The Librarian would be glad of help in obtaining any of these copies. There must be medical men who have kept some of them and who are good natured enough even to break a private set for the benefit of the University's records.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

The undermentioned have been registered under the provisions of *The Medical Act*, 1912 and 1915, of New South Wales, as duly qualified medical practitioners:

Evans, Robert, M.B., B.Ch., 1924 (N.U., Ire.), Elizabeth Cottage, Vernon Street, Woolrahra.
Sharwood, Beatrice, M.B., B.S., 1923 (Univ. Melb.), 318, Riversdale Road, East Camberwell, Melbourne.

Registration of Additional Qualifications.

Arnold, William John, B.S., 1927 (Univ. Sydney).
Bellingham, Francis Arthur, B.S., 1927 (Univ. Sydney).
Benz, Gladys Dulcie Carrie, B.S., 1927 (Univ. Sydney).
Blackall, Moya Kathleen, B.S., 1927 (Univ. Sydney).
Bohrsmann, Gustav Temple Hall, B.S., 1927 (Univ. Sydney).
Brodziack, Innes Albert, B.S., 1927 (Univ. Sydney).
Brown, Isobel May, B.S., 1927 (Univ. Sydney).
Bull, Ignatius Loyola, B.S., 1927 (Univ. Sydney).
Canny, Alan Joseph, B.S., 1927 (Univ. Sydney).
Chenhall, Frederick Nicholas, B.S., 1927 (Univ. Sydney).
Cronin, Mary Josephine, B.S., 1927 (Univ. Sydney).
Ducker, Alan Lyall, B.S., 1927 (Univ. Sydney).
Eizenberg, Horace Joseph, B.S., 1927 (Univ. Sydney).

- English, Peter Bede, B.S., 1927 (Univ. Sydney).
Gelkie, Gertrude Cameron, B.S., 1927 (Univ. Sydney).
Ginsberg, Maurice William, B.S., 1927 (Univ. Sydney).
Guinane, James Vincent, B.S., 1927 (Univ. Sydney).
Hardy, Marie Naomi, B.S., 1927 (Univ. Sydney).
Holt, Walter Gerald, B.S., 1927 (Univ. Sydney).
Kelly, John Augustine, B.S., 1927 (Univ. Sydney).
Lawrie, Charles Malcolm, B.S., 1927 (Univ. Sydney).
Lewis, David Herbert, B.S., 1927 (Univ. Sydney).
Magill, William Louis, B.S., 1927 (Univ. Sydney).
Maher, Adrian Odillo, B.S., 1927 (Univ. Sydney).
Mayes, Bruce T'oomba, B.S., 1927 (Univ. Sydney).
Millar, David Fitzroy, B.S., 1927 (Univ. Sydney).
Morrow, Arthur William, B.S., 1927 (Univ. Sydney).
Newton, William Neild, B.S., 1927 (Univ. Sydney).
O'Brien, John, B.S., 1927 (Univ. Sydney).
Platt, Albert Edward, B.S., 1927 (Univ. Sydney).
Rau, Noel, B.S., 1927 (Univ. Sydney).
Redshaw, George Muir, B.S., 1927 (Univ. Sydney).
Ross, Garnet Andrew, B.S., 1927 (Univ. Sydney).
Russell, Gerald, B.S., 1927 (Univ. Sydney).
Smith, William Frederick, B.S., 1927 (Univ. Sydney).
Steele, Frederick George, B.S., 1927 (Univ. Sydney).
Stening, George Grafton Lees, B.S., 1927 (Univ. Sydney).
Teifer, Archibald Craig, B.S., 1927 (Univ. Sydney).
Ternes, Alfred Christopher, B.S., 1927 (Univ. Sydney).
Vout, Lawrence, B.S., 1927 (Univ. Sydney).
Walker, Milner Frederick Elford, B.S., 1927 (Univ. Sydney).
Walker-Taylor, Philip Neville, B.S., 1927 (Univ. Sydney).
Whittemore, John Bede, B.S., 1927 (Univ. Sydney).
Williams, Morris Albert, B.S., 1927 (Univ. Sydney).
Windeyer, Brian Wellingham, B.S., 1927 (Univ. Sydney).
Wing, Lindon Worledge, B.S., 1927 (Univ. Sydney).

TASMANIA.

The undermentioned have been registered under the provisions of *The Medical Act*, 1918, of Tasmania, as duly qualified medical practitioners:

Giblin, Thomas, M.B., B.S., 1926 (Univ. Melbourne), Hobart.
Sheehan, Eleanor Marcella, M.B., B.S., 1924 (Univ. Melbourne), Devonport.
Thrower, William Robert, L.R.C.S., L.R.C.P. (Edinburgh), L.F.P.S. (Glasgow), 1892; St. Helens.

VICTORIA.

The undermentioned have been registered under the provisions of Part I of *The Medical Act*, 1915, of Victoria, as duly qualified medical practitioners:

Eppel, David, L., L.M., R.C.P. et S., (Ireland), 1922;
"St. Amand," Park Street, South Yarra.
Brothers, Charles Ronald David, M.B., B.S., 1927
(Univ. Melbourne), North Motton, Tasmania.
Hadley, Robert Henry, M.B., B.S., 1927 (Univ. Melbourne), Haughton Cottage, Lower Sandy Bay, Hobart.
Wood, Ian Jeffreys, M.B., B.S., 1927 (Univ. Melbourne), 193, George Street, East Melbourne.

Additional qualifications registered:

John Fiddes, M.D. (Aberdeen), 1926.
Alfred Plumley Derham, M.D. (Melbourne), 1923.

QUEENSLAND.

The undermentioned have been registered under the provisions of *The Medical Act* of 1925 of Queensland, as duly qualified medical practitioners:

Bean, John Willoughby Butler, M.R.C.S. (England), L.R.C.P. (London) 1907, B.C. 1909, M.D. 1912
(Univ. Cambridge), Brisbane.

Kelly, James Patrick, L.R.C.P.S. (Edinburgh) 1889, L.F.P.S. (Glasgow) 1889, M.B., B.S., 1902 (Univ. Melbourne), Thargomindah.

Webb, James, M.B. (Univ. Toronto) 1900, M.C.P. and S. (Ontario) 1921; Pialba.

Restoration to the Register.

Parer, Vincent Stanislaus, M.B., B.S., 1921 (Univ. Melbourne), Mount Perry.

Books Received.

A STUDY IN TUBERCLE VIRUS, POLYMORPHISM AND THE TREATMENT OF TUBERCULOSIS AND LUPUS WITH OELUM ALLII, by William C. Minchin, M.D. (Dublin); Third Edition; 1927. London: Baillière, Tindall and Cox. Crown 4to., pp. 126, with illustrations. Price: 25s. net.

PRACTICAL BACTERIOLOGY, BLOOD WORK AND ANIMAL PARASITOLOGY INCLUDING BACTERIOLOGICAL KEYS, ZOOLOGICAL TABLES AND EXPLANATORY CLINICAL NOTES: A COMPENDIUM FOR INTERNISTS, by E. R. Stitt, A.B., Ph.G., M.D., Sc.D., L.L.D.; Eighth Edition, Revised and Enlarged; 1927. Philadelphia: P. Blakiston's Son and Company. Post 8vo., pp. 852 with illustrations. Price \$6.00 net.

DICTIONARY OF BACTERIOLOGICAL EQUIVALENTS: FRENCH-ENGLISH, GERMAN-ENGLISH, ITALIAN-ENGLISH, SPANISH-ENGLISH, by William Partridge, F.I.C.; 1927. London: Baillière, Tindall and Cox. Crown 8vo., pp. 153. Price: 10s. 6d. net.

Diary for the Month.

- DEC. 6.—Tasmanian Branch, B.M.A.: Council.
- DEC. 6.—New South Wales Branch, B.M.A.: Ethics Committee.
- DEC. 7.—Victorian Branch, B.M.A.: Annual General Meeting. Election of Council, 1928.
- DEC. 7.—Western Australian Branch, B.M.A.: Council.
- DEC. 7.—South Sydney Medical Association, New South Wales.
- DEC. 8.—New South Wales Branch, B.M.A.: Branch.
- DEC. 8.—Victorian Branch, B.M.A.: Council. Election of Office Bearers.
- DEC. 8.—South Australian Branch, B.M.A.: Council.
- DEC. 9.—Queensland Branch, B.M.A.: Branch (Annual).
- DEC. 13.—Tasmanian Branch, B.M.A.: Branch.
- DEC. 13.—New South Wales Branch, B.M.A.: Executive and Finance Committee.

Medical Appointments.

Dr. Eric Preston Holland (B.M.A.) has been appointed Government Medical Officer at Grafton, New South Wales.

Dr. Ronald Cuttle (B.M.A.) has been appointed Government Medical Officer at Junee, New South Wales.

Dr. Robert McMahon Glynn (B.M.A.) has been appointed Honorary Clinical Assistant to the Aural Department of the Adelaide Hospital, South Australia.

Dr. Eric Frank Gartrell (B.M.A.) has been appointed Assistant to the Honorary Officer in charge of the electrocardiograph at the Adelaide Hospital, South Australia.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xviii.

LAUNCESTON PUBLIC HOSPITAL: Junior Resident Medical Officer (male).

MATER MISERICORDIE HOSPITAL, NORTH SYDNEY: Resident Medical Officer.

RENWICK HOSPITAL FOR INFANTS, SUMMER HILL: Resident Medical Officer.

ROYAL ALEXANDRA HOSPITAL FOR CHILDREN, SYDNEY: Temporary Honorary Relieving Medical Officers (Three).

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.I.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30-34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Members accepting appointments as medical officers of country hospitals in Queensland are advised to submit a copy of their agreement to the Council before signing. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Contract Practice Appointments in South Australia. Booleroo Centre Medical Club.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Medical practitioners are requested not to apply for appointments to position at the Hobart General Hospital, Tasmania, without first having communicated with the Editor of THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

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